AMERICAN ARTISAN

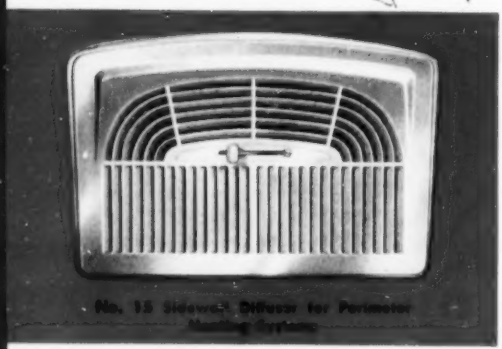
January, 1953
DIRECTORY & SHOW NUMBER

RESIDENTIAL AIR CONDITIONING • WARM AIR HEATING • SHEET METAL CONTRACTING

For those who know - it's

AIR CONTROL





"Registers . . . grilles . . . diffusers . . . they're my business! I know 'em from A to Z. When I use 'em, they've *got* to be good. I want to be sure there's a complete line available, easy to install and trouble-free. That way I know I'll make money. *So I insist on Air Control!*"

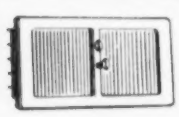
Make a point of trying Air Control products. *You* know quality. You know how easy installation and trouble-free performance cut down your costs. *You* know customers are pleased when the parts of the heating system they see every day are good-looking. You can be *sure* of all these when you use Air Control products. Order Air Control on your next job. The prices are right. You'll understand why men who work with this equipment every day say: "For those who *know* — it's Air Control."

Send Today *for colorful complete AIR CONTROL Catalog No. 52AC — FREE!*

AIR CONTROL PRODUCTS, INC.

Dept. A **Coopersville, Michigan**

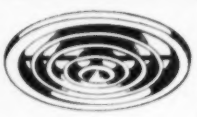
AIR CONTROL PRODUCTS



Registers & Grilles



Perimeter Floor Diffusers



Ceiling Diffusers



Return Air Intakes



Perimeter Sidewall Diffusers



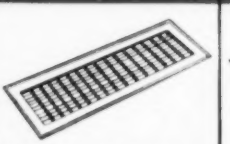
Stackhead Dampers



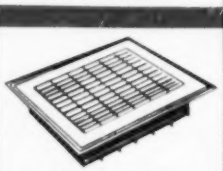
Diffuser Dampers



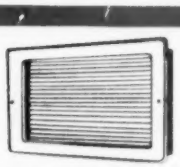
Gravity Registers



Return Air Faces



Floor Registers



Vision-proof Grilles



Ventilators

ANOTHER HEATING INSTALLATION SOLD TODAY!





YES, MORE SALES ARE MADE FROM A COMPLETE LINE!

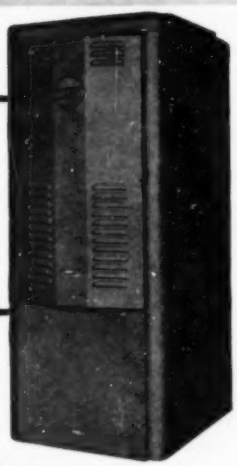
CENTURY'S Complete Gas & Oil Line helps *close* more sales . . . *make* more sales!

Fit the unit to the job without compromise or hesitation. Select and recommend from 40 models of gas or oil fired Century units. You can be sure of your judgment and your own confidence will convince your prospect. Resistance is always more easily overcome when your sales points are backed up by Century's Complete Line.

Write or call Century's Heating Sales Division today. You'll learn more about the complete heating line that *closes* more sales and *makes* more sales.

Lined up for more sales, just a part of Century's Complete New Line

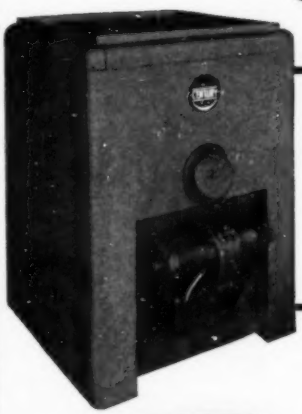
NEW CENTURY HIBOYS Restyled and redesigned for efficient service-free heat at a competitive price. Bottom, side or rear air intake. (4 models gas and 4 models oil.)



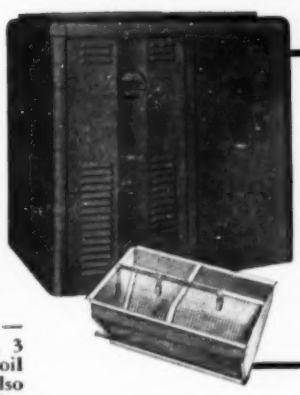


NEW CENTURY COUNTER-FLOWS—Permits installation *flush* at sides and rear, giving *zero* clearance! May be installed even on combustible floors! Approved by A.G.A. and Underwriter's Laboratories Inc. Another Century first. (4 models gas and 4 models oil.)

APPROVED FOR ZERO CLEARANCE



NEW CENTURY GRAVITY UNITS Low cost heating, compact and easy to install. A realistic solution for small and medium sized homes. (3 models gas and 3 models oil.)



NEW CENTURY LOBOYS Newly engineered to incorporate (optional) the exclusive Century Air Washer for automatic "living room control" of the exact degree of humidity desired. (6 models gas and 8 models oil.)

To round out the line: — Boiler-Burner Units (oil, 3 models) and gas and oil Conversion Burners. Also Industrial type Hiboy units.

Century

CENTURY ENGINEERING CORPORATION, Cedar Rapids, Iowa

. . . manufacturers of fine automatic heating equipment for 27 years

Nationally advertised in leading home magazines.

AMERICAN ARTISAN

JANUARY 1953

FEATURES

Heating Basementless Homes with Warm Air 82

Good Duct Design for Cooling and Heating 86

How Heat Wave Affects Air Conditioning 91

Estimating Form Helps Forecast Cost 92

Heat Loss from Slab Floors and Basement Walls 96

Outfitting "Snack Bars on Wheels" 98

Schedule 1953 Indoor Comfort Conferences 105

What's Energy Consumption of Heat Pumps? 106

Bright Metals for the White House 109

Contractor Stays Small But Healthy 110

Designing Ductwork for Higher Pressures 112

When Are Quoted Prices Binding? 116

How Shop Efficiency Can Be Improved 119

Two Acres of Stainless Steel Roof 120

Making a Center Reverse Stack Elbow 122

Show Section (complete information on exposition and ASHVE annual meeting in Chicago this month) 133

1953 Directory Section of Warm Air Heating, Residential Air Conditioning and Sheet Metal Products (opposite page 316) 1d

Index to Advertisers 109d

CONVENTION REPORTS

New Approaches to Warm Air Heating 100

DEPARTMENTS

The Editor's Notebook 6

News Round-Up 29

Washington Letter 39

Editorial 81

Association Activities 125

Equipment Developments 230

New Literature 280

We Hear That 282

Appointments 292

Founded 1864

Volume 90 No. 1

RESIDENTIAL AIR CONDITIONING

WARM AIR HEATING

SHEET METAL CONTRACTING

Merged with American Artisan are "Warm Air Heating" and "Furnaces and Sheet Metals"

EDITOR
CLYDE M. BARNES

ASSOCIATE EDITOR
A. H. BURNS

EDITORIAL ASSISTANT
H. C. LENNARTSON

ADVERTISING STAFF

WALLACE J. OSBORN
ROBERT J. OSBORN
New York City
MUrray Hill 9-8293

ROBERT A. JACK
DAVID V. MAHAN
Cleveland
EVergreen-2-1840

JAMES D. THOMAS
GEORGE C. CUTLER
JAMES E. SACRA
Chicago
STate 2-6916

R. PAYNE WETTSTEIN
Los Angeles—DUnkirk 8-2286
San Francisco—YUkon 6-2522
Portland—ATwater 4107

Published monthly by Keeney Publishing Company, 6 N. Michigan Ave., Chicago 2, Ill., U.S.A.

Copyright 1952 by Keeney Publishing Company.

Publisher—FRANK P. KEENEY
Manager—CHARLES E. PRICE
Editorial Director—C. M. BURNAM JR.
Production Manager—L. A. DOYLE
Circulation Director—FRANK S. EASTER

Member of Audit Bureau of Circulations, Magazine Publishers Association, Inc., and Associated Business Publications

Yearly Subscription Price—U.S. and possessions, $3.00; Canada, Cuba, Mexico, South America, Central America, $4.00; Others $6.00. Single copies, U.S. and possessions, 35c. Back numbers, 60c, January, 1953, Directory Issue, $1.50 per copy. *Change in Address:* Report new and old address to publisher and local post office; deadline 23rd-25th of preceding month. Entered as second-class matter, July 29, 1932, at the post office at Chicago, Illinois, under the Act of March 3, 1879. Additional entry at Mendota, Ill.

make money in a new market with champion's small pipe systems

It's just as if someone plunked an entire housing development in your lap! Over America thousands now can afford central heating in their new small homes . . . owners of thousands of older homes now can have their heating system modernized economically — all are now in the market for CHAMPION's small pipe systems. Profits are greater, too! Champion standardized fittings and pipes for both the extended plenum system and the individual pipe system are easy to install . . . takes less labor — mean *more* jobs in *less* time!

IT PAYS TO STICK WITH A CHAMPION!

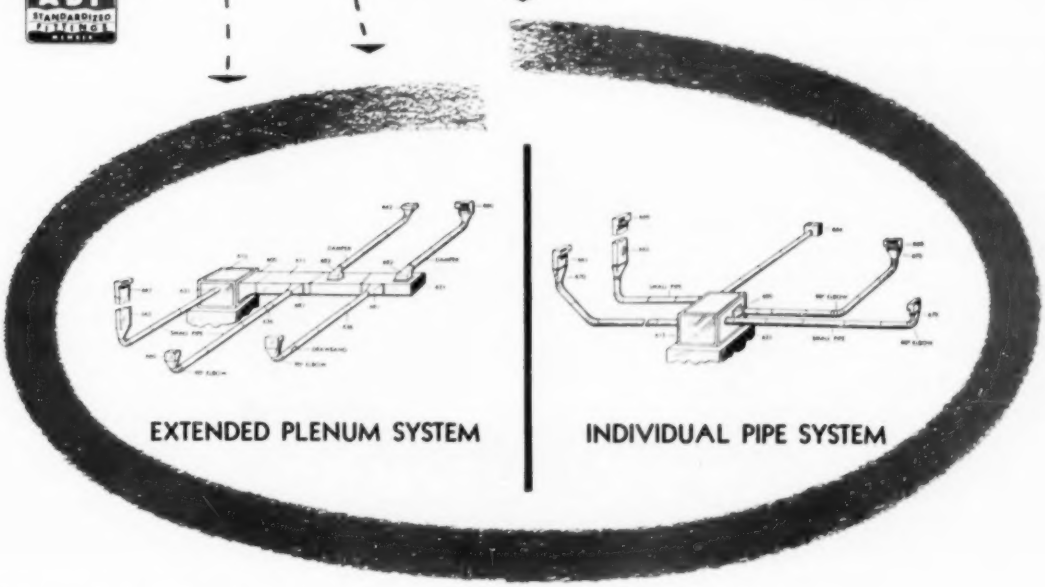
Pipes and fittings GUARANTEED to fit perfectly! That's because each piece is made from precision dies. It pays to let CHAMPION eliminate time-consuming shop work . . . simplify your installations. A complete line of both small and conventional pipes and fittings available for immediate shipment.

WRITE FOR NEW CATALOG SUPPLEMENT

Describes CHAMPION line of high velocity and perimeter fittings. Ask for our general catalog, too, if you don't have one.

CHAMPION

CHAMPION FURNACE PIPE COMPANY
211 Eaton Street, Peoria, Illinois • Phone 6-4639



EXTENDED PLENUM SYSTEM

INDIVIDUAL PIPE SYSTEM

If You're Going to Chicago . . .

IF YOU PLAN to be in Chicago later this month for the International Heating, Ventilating and Air Conditioning Exposition and the annual meeting of the ASHVE, study in advance the special Show Section published in this issue and check the products and equipment to be displayed so you won't miss what you want to see when you get there.

It's a good idea to take your copy of American Artisan along with you to Chicago so that you'll have it at hand for ready reference during the busy week there.

Aluminum Capacity Up

DAVID P. REYNOLDS, vice president in charge of sales, Reynolds Metals Co., asserted at a recent meeting of the National Association of Aluminum Distributors that when plants now under construction are completed, the nation's capacity for the production of aluminum will be nearly ten times that available at the start of World War II. Mr. Reynolds pointed out that aluminum is the only major metal which is no higher in price today than it was before World War II, despite the increase in labor, transportation and material costs during the past 12 years. In recent years, Mr. Reynolds said, more than 4000 new peacetime uses for aluminum have been perfected.

Old Timers to Meet

THE OLD TIMERS CLUB of the Oil Burner Industry will hold a get-together on the evening of January 27, under the auspices of the Midwest Old Timers' Club, at the Furniture Club, at the top of the Furniture Mart, Chicago. Requests for reservations should be sent to H. A. Maccubbin, 120 Madison St., Villa Park, Ill. The gathering will take place in conjunction with the January International Heating, Ventilating and Air Conditioning Exposition.

HERE THEY ARE... SENTRY'S TWO NEWEST ADDITIONS TO THEIR EVER-POPULAR

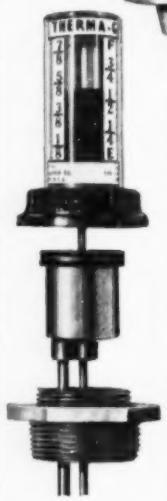
AT-A-GLANCE (DIRECT AND REMOTE) TANK GAUGES



THERMA-GAUGE

A superior quality, precision instrument with full view, solid red thermometer-type indicator

Without question, here is the easiest to read, *accurate measure* gauge on the market—And, the easiest to install, whether tank is empty, full or partially full. Unit features zinc base metal, two-piece die-cast assembly — Unbreakable red plastic assembly nut — Calibration chart, sealed between heavy, heat-resistant plastic domes — Brass rivets — And, a *double coated* cork float that's impervious to oil, many chemicals and acids. No gears, magnets, cams or tapes. Guaranteed to withstand in excess of 70 lbs. pressure per sq. inch. Tailor-made to fit individual tanks up to 12 ft. deep. Calibrated and factory adjusted.



QUICKLY, SIMPLY INSTALLED. Illus. at left shows how entire calibration and float assembly may be inserted and positioned *after* two piece die-cast tank plug has easily been installed in tank — only an ordinary wrench is needed.

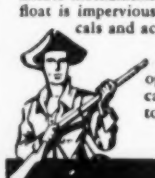
SENTR-ECON

Write for complete details — literature



A new, durable, low cost instrument for economy installations.

Exceptionally high quality for such a competitively priced gauge. Features patented *double dome* with calibrations positioned between inner tube and outer heat-resistant plastic shell. Also, die-cast tank fitting — plated metals — brass rivets. No gears, magnets, cams or intricate mechanisms. *Double coated* cork float is impervious to oils, most chemicals and acids. Simple to install, even in partially-filled tanks. 1½" openings only. Factory calibrated and adjusted to insure accuracy.



KRUEGER *Sentry* GAUGES

GREEN BAY • WISCONSIN

the editor's notebook

(continued)

Volume Index Soon Available

AN INDEX for American Artisan's 1952 issues, Vol. 89, Nos. 1-12, is being compiled and will be available soon to the Artisan's subscribers on request. If you want a free copy, send a note or postcard to the Editor, American Artisan, 6 N. Michigan Ave., Chicago 2. We'll keep your request on file until the index has been printed, and will then mail a copy to you.

A Good Idea

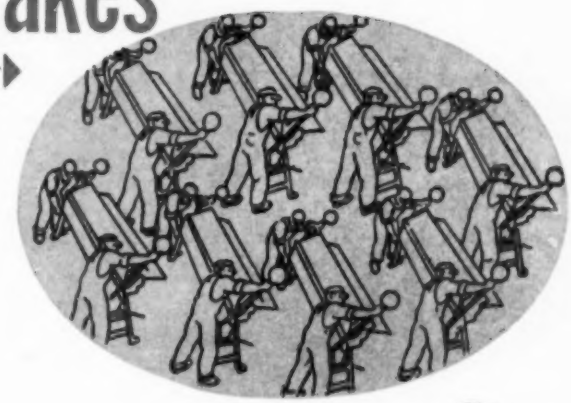
I JUST WANT you to know that I liked your editorial "Together We Stand". If we can follow up on the level established, I am sure we will have no trouble in bringing to the attention of your readers the value of association membership.

J. D. WILDER
Executive Secretary
Sheet Metal Contractors' National Association, Inc.
Elgin, Illinois

Says Europe Tops U.S. In Aluminum Uses

A NEW TYPE of "reverse arch" roofing, developed in Switzerland, is gaining great success on the continent, where it is being used instead of the traditional tile roof, reports Frank R. Nichols, president, Nichols Wire and Aluminum Co., Davenport, Ia. "It is cheap, lightweight, exceptionally strong, easily installed, and fastened

16 men and 8 brakes



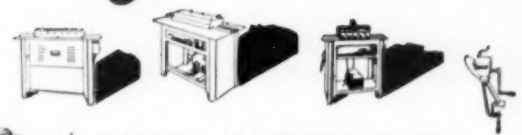
...or 1 man and a LOCKFORMER



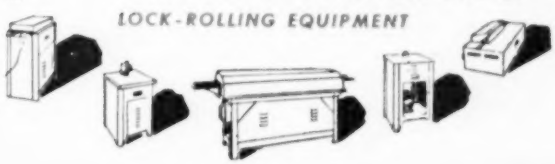
BETTER LOCKS — FASTER One man and a Lockformer makes more Pittsburgh Locks than sixteen men working with eight brakes. And Pittsburghs made on the Lockformer are perfectly uniform . . . look like the quality work they really are . . . assemble easier and faster without further prying open by hand.

MULTI-PURPOSE Lockformers equipped with extended shafts for Auxiliary Rolls also make Double Seams, Standing Seams, Drive Cleats and Right Angle Flanges...and, if equipped with the Flanger Attachment, are power flangers as well as lock-rolling machines. Lockformers can be set up for as many as three different jobs without change-over!

PROVEN DEPENDABILITY There are more than 25,000 Lockformers in use today. Machines delivered over 15 years ago are still giving trouble-free service, day in and day out. Because they cut over-all fabrication costs in half, Lockformers pay for themselves quickly out of the "extra" profits they earn!



★ *THERE IS A LOCKFORMER TO FIT YOUR NEEDS AND YOUR BUDGET IN LOCKFORMER'S COMPLETE LINE OF LOCK-ROLLING EQUIPMENT*



THE LOCKFORMER CO.

4615 WEST ROOSEVELT ROAD • CHICAGO 50, ILLINOIS

the editor's notebook

(continued)

only from within the buildings," he said. "We have nothing like it."

On his recent return from a tour of seven countries, Mr. Nichols said that the British Isles and the continent are leading us in processes and finishes on foil and sheet. He said the British and French have developed a substantial export market for aluminum prefabricated houses particularly suited to tropical climates where heat reflection and resistance to moisture are important.

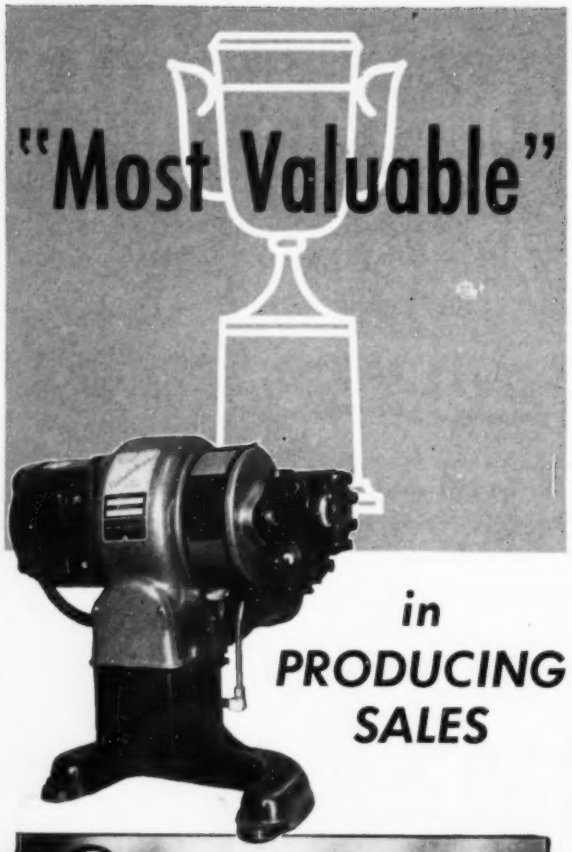
Special Features in This Issue

TWO EDITORIAL features appear in this issue of American Artisan. One of them is the annual Directory Section of warm air heating, residential air conditioning and sheet metal products — which has been thoroughly revised and brought up-to-date. The other special feature is the Show Section, which "previews" the 11th International Heating, Ventilating and Air Conditioning Exposition in Chicago, January 26-30, and which contains complete information on the 59th annual meeting of the American Society of Heating and Ventilating Engineers, to be held in the same city that same week. As is usual each January, these features are in addition to our regular monthly editorial content.

Report Construction Activity in November

EXPENDITURES FOR new construction totaled almost $2.8 billion in November, a 7 per cent decline from October, according to preliminary estimates of the U. S. Labor Department's Bureau of Labor Statistics and the Building Materials Division of the U. S. Department of Commerce.

All classes of construction activity except commercial



Sundstrand
All Electric
OIL BURNER

Such integral values as design, construction and performance give the Sundstrand line selling power backed by consumer acceptance.

The public hears about Sundstrand. They see Sundstrand. They buy Sundstrand.

Because: Ultimate heating satisfaction means having an oil burner with

★ *DURABILITY*
★ *DEPENDABILITY*
★ *COMPACT DESIGN*
★ *OVERALL ECONOMY*
★ *QUIET OPERATION*

These salient features result from 32 years of engineering and development by Sundstrand. Available is a complete line of oil burners for new installations or conversion. To increase *your* sales with Sundstrand,

write to —

SUNDSTRAND ENGINEERING CO.
ROCKFORD, ILLINOIS

the editor's notebook

(continued)

building shared in the downward movement from October, but the declines were less than seasonal in most major types of work. Public construction dropped relatively more than private during November because of a $100 million decline in highway work, which lagged slightly more than is usual for this time of year. Nevertheless, the total dollar outlay for new public construction during November was 9 per cent above the November 1951 level, and private expenditures were 5 per cent greater. November 1952 expenditures for private construction totaled $1917 million, while the volume of public construction totaled $882 million. Expenditures for private non-farm housing remained above the billion-dollar level for the fifth consecutive month.

Letter to the Editor

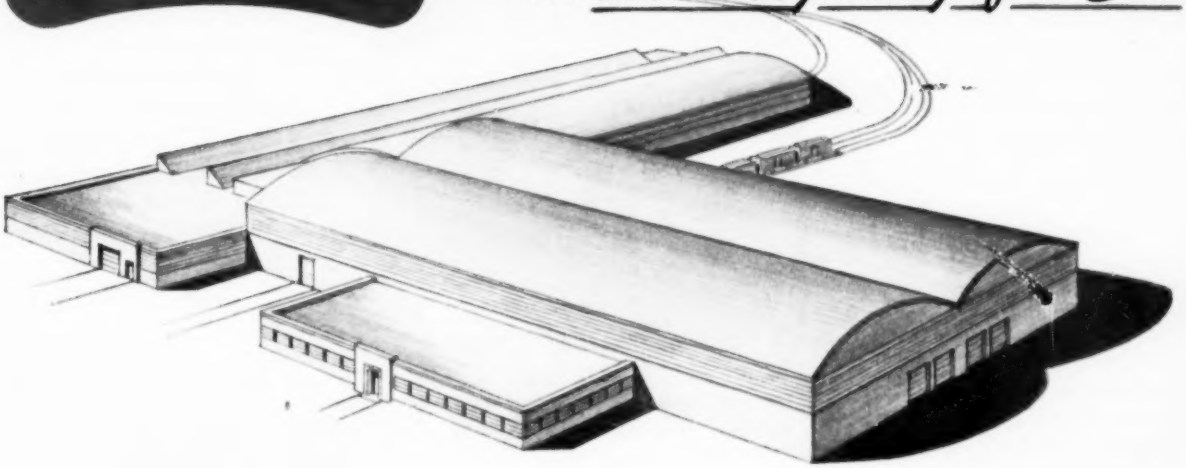
DEAR SIR:

Had several disappointing experiences recently in regard to false promises being made. The writer called the sales manager of a manufacturer of a type of overhead oil fired heaters and was assured that two units could be delivered within a week. The order was placed on that basis. The agreement was that the writer was to be notified by telephone or telegram on the following Tuesday as to exact date and routing of shipment.

No word was received from the seller and two days later the writer again called the sales manager. He was informed that his firm lacked skids, but that the units were ready except for mounting on skids and then being painted. He explained that the units passed along the production line on skids. Shipment was promised in a few days.

The latest promised date elapsed and two more days. We

35 Years mark the end of the beginning...
...and the beginning of an Era



in its 35th anniversary year

Wolff Metal Service

has built the most modern metals warehouse in the Midwest to be of greater value to YOU

YOU were here, at the right-hand side of the architect, when the blueprints for this building were drawn, and everything in the building plan has been laid out to make it more functional for YOU. Far greater floor area will give you the advantage of larger, more diversified stocks to depend on as your own; more loading facilities will lessen the daily pressure on deliveries; and additional equipment will help you gain time and save money when the material you require needs special preparation.

Working with YOU as an integral, intimate part of your organization to overcome difficulties and smooth out your work is the basic spirit of the growing group of alert people at Wolff Metal Service. Their willingness to go out and do a job has, seemingly, appealed to many, for it has carried this company from obscurity to a warehouse structure that measures up to the best in all-around facilities. So it is that this new building marks the end of the beginning for Wolff Metal Service—and inversely, the beginning of a new era. You can be certain of this in the days that lie ahead; more than ever your orders to Wolff are not just to be taken—*every one of them will be earned.*

The physical job of moving into these new quarters is one that requires weeks, and it will not be completed until late February. You are, however, invited to look in, and look around, any time you are in the neighborhood. You'll find the new address below; and when we're in, and fully settled, you'll find a welcome mat at the door for YOU.

Carbon Steels
Stainless Steels
Aluminum
Copper
Expanded Metal
Tin Mill Products
Metal Decorating

WOLFF METAL SERVICE

Our new address will be — 1945 North Cornell Avenue, Melrose Park, Illinois

BENJAMIN WOLFF AND COMPANY

General Office and Warehouse — 5800 South Souley Ave., Chicago 36, Ill.

the editor's notebook

(continued)

sent a telegram asking shipping information. No reply. Two days later we sent another telegram asking for a reply and to that an answer came stating that shipment would be made in a week. We now wait; probably a further delay will result.

From another manufacturer we ordered by telegram a replacement pump for a burner to be shipped by air express. We requested prompt reply as to shipping information. Four days later, not yet having any information, we sent another telegram to which we received the reply that shipment was to be made that day.

We sent for repairs for a space heater oil control valve to the manufacturer on the fourth of the month. Not having received it back by the 24th, we wrote a letter. Their letter promised shipment on the sixth of the next month. Actual shipment was made on the 13th.

The first instance is extremely unbusinesslike. We did not obtain answers until we begged for them and then they were lies.

The last instance involves a manufacturer who does a national business and should be set up to give prompt service. We shall certainly shy away from any other controls which the firm manufactures.

Is the entire heating business being run on this basis or have we just been unfortunate in these three incidents? These occurrences are just recent samples of what seems to be an increasing evil. If there is a trend in this direction perhaps you could editorially do some good to the heating industry by berating these practices.

By way of explanation we might say that we have an excellent credit rating and there was no delay because of that or any other such circumstance.

Should you desire the names of the firms involved we shall be glad to give you this information, which we trust would be kept in confidence.

Very truly yours,



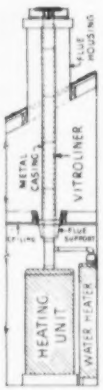
VITROLINER

PREFABRICATED and PACKAGED

CHIMNEYS

VITROLINER CHIMNEYS ARE TODAY'S BEST BUY FOR THE MODERN '53 HOME OR BUILDING. WHY?

- THE INITIAL PRICE is low — approximately half the cost of a masonry chimney. The quality is high.
- THE ARCHITECT has greater flexibility of design and space saving features.
- THE BUILDER saves time and money and has less installation labor.



- THE LOWEST INSTALLATION TIME — because Vitroliner is pre-cut at the factory, tailor-made for each job and lightweight.
- PROVEN SUCCESSFUL because it is nationally accepted by leading home project builders and single contractors! Approved by F.H.A. — and listed by Underwriters Laboratories for all fuels in 1 or 2 story construction.
- *ENGINEERED for better performance — improves chimney draft — eliminates condensation trouble — and is impervious to modern fuel combustion gases.*

Visit our display booth at the NAHB Convention and Exposition Jan. 18-22 Chicago

Investigate this fast selling, well designed chimney today. Write for literature and quotations.

CONDENSATION ENGINEERING CORPORATION
3511 W. POTOMAC AVE., CHICAGO 51, ILL.

the editor's notebook

(continued)

Rise in Output of Boron Steel

THE PRODUCTION of alloy steel with boron as one of its alloying elements has risen rapidly this year, The American Iron and Steel Institute reports.

In the first nine months of 1952 the output of this steel, at 507,358 net tons, exceeded the output in all of 1951 at 354,495 tons. As a percentage of total alloy steel other than stainless it jumped to 9.2 per cent in nine months of this year from 4 per cent in all of 1951. Prior to 1951 very little boron was used in steel, its broader introduction after the beginning of war in Korea being for the purpose of conserving critical alloy materials. Boron increases the ability of the steel to harden deeply, when heat treated, by quenching and tempering. That action increases the steel's strength without reducing its toughness.

Homes the Greatest Potential World Market

"ENGINEERS HAVE played too small a part in the home building industry, and as a result the industry is behind the place where it should be today," said John C. Taylor, Jr., American Houses, Inc., at the recent ASME annual meeting.

"The building of homes constitutes the greatest potential market in the world. Every part of the world is in need of homes. In fact, the number of millions needed almost staggers the imagination.

"One of the greatest handicaps in most countries is lack of suitable materials out of which houses can be built economically. Also, in Israel, Greece, Brazil, India, Cuba, Indonesia and many other countries, the cost of homes built today transformed into

NOW YOU CAN PROFIT 5 WAYS with Nu-Way

OIL BURNERS



Plan now to have one of your best profit years . . . the Nu-Way. The five different domestic and commercial model sizes will give you a complete line of oil burners with capacities ranging from .2 GPH to 20 GPH. And the exclusive patented features found on all Nu-Way Oil Burners will mean easier sales for you. In addition, you are provided with a wide variety of local selling aids . . . newspaper ad mats, mounted displays, direct mail pieces, booklets and catalogs. Remember, you can profit five ways when you sell the Nu-Way.

Nu-Way
OIL HEATING EQUIPMENT

THE NU-WAY CORPORATION
ROCK ISLAND, ILLINOIS
Sold through Jobbers and Distributors
Also Special Applications for Furnace or Boiler Manufacturers

"Automatic Oil Heat Exclusively Since 1921"

the editor's notebook

(continued)

the wages of the average worker represents as much as 10 years of gross income. In our country we think in terms of 2½ times the gross income for a year as a reasonable price for a home, and yet here, costs are too high to meet the demand in many classifications.

"Weight is another important retarding factor— because transportation is a real factor in cost. It has been estimated that in a four-room house built in this country of a 700 to 720 square foot area, there is involved approximately 21,000 ton miles of tranportation."

Book Covers Heat Transfer

"HEAT TRANSFER PHENOMENA," a new book by R. C. L. Bosworth, treats heat transfer as a particular example of the class of transport phenomena, and gives a concise account of all the recent advances in the field. Subtitled *The Flow of Heat in Physical Systems*, the book discusses the classification of transfer process, the thermal conductivity of gases, and thermal radiation and conductivity in condensed phases. Further information is provided on natural convection, forced convection or the simultaneous transport of heat and momentum, the simultaneous transport of heat and mass, the use of the equivalent electrical circuit, and thermodynamical similarity.

Dr. Bosworth is manager of the research department at the Colonial Sugar Refining Company in Sydney, Australia.

This 211 page book, published by John Wiley & Sons, Inc., New York, is priced at $6.00.

New York City Building Activity Lower

BUILDING CONSTRUCTION valued at $286 million was started in New York City during the first 10 months of 1952, according to preliminary figures released today by Robert R. Behlow, Regional Director of the U. S. Department of Labor's Bureau of Labor Statistics. The continued lag in both public and private construction has resulted in a 10 per cent decline from the rate of building activity during the same period last year.

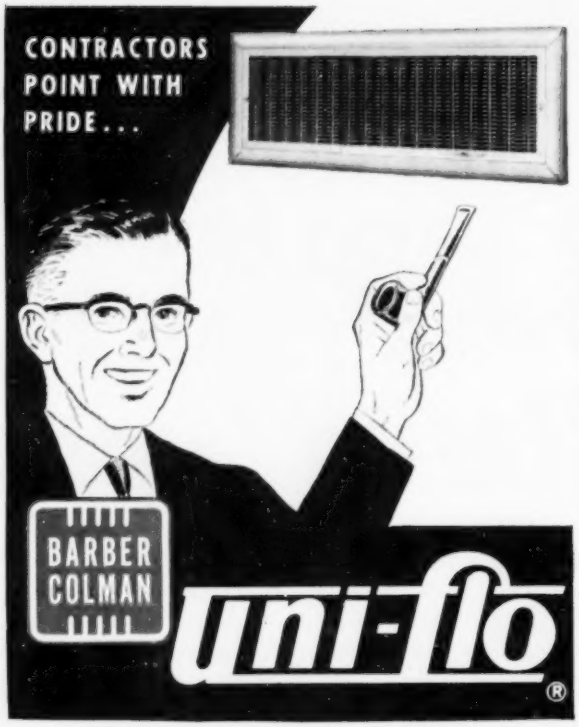
Private housing placed under construction from January through October is valued at $96 million, representing a total of 12,020 new dwelling units, a decline of 20 per cent from last year's rate of $120 million. October housing starts, however, were higher than any previous month in 1952 with 2096 privately financed units begun. These included 321 single-family homes, 136 units in 2 to 4 family houses and 1639 rental apartments. In addition, work was initiated on 510 apartments in public housing developments.

Survey Petroleum Capacity

PETROLEUM REFINERS in the United States expect to have an effective capacity for production of about 8,150,000 barrels a day of crude by the end of 1953 and 8,300,000 barrels a day by the end of 1954, according to a survey by the Petroleum Administration for Defense.

Stainless Steel Shipments Higher Than Ever

STAINLESS STEEL shipments in October were considerably higher than ever before at 57,232 tons. Shipments of other alloy steels closely approached record proportions at 561,593 tons. While rising trends were shown in most steel products, recent increases were noted in galvanized sheets and old rolled sheets. Figures were reported by the American Iron and Steel Institute.



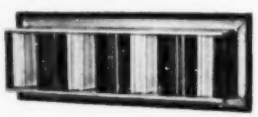
DOUBLE DEFLECTION GRILLES



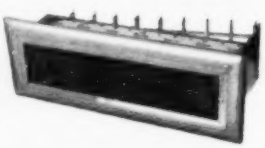
Contractors can point with pride to their installations when Uni-Flo is used. From every standpoint, Customer Reaction, Appearance, and Performance, Uni-Flo is tops — testimony of quality workmanship. Capitalize on the sales advantages which the word-of-mouth praise and prestige of Uni-Flo will add to *your* installations. Air pattern adjustment is simple and tamper-proof. Three frame styles available in all sizes.

ADDED ADVANTAGES

VOLUME CONTROL
Integral Volume Control is factory assembled for simple, rapid installation. Opposed blade construction gives accurate control for easy system balancing.



DEFLECTROL
Double Deflection Grilles, combined with Volume Control and Deflectrol, reduce fabrication and erection costs. Stub ducts and take-offs are eliminated.



WRITE FOR BULLETIN F-3717...

BARBER-COLMAN COMPANY
ROCKFORD, ILLINOIS, U.S.A.

TRY IT YOURSELF.....
LOOK AT THE PRICE TAG!

You'll ask only one question: "How soon can I get one?"

Once again, Lockformer pioneers a NEW METHOD rather than merely a new machine . . . duplicates the speed and accuracy of extremely high cost special purpose equipment . . . AND BRINGS THE PRICE DOWN WITHIN THE REACH OF EVEN THE SMALLEST SHOPS!

The *NEW* LOCKFORMER Slitting Attachment



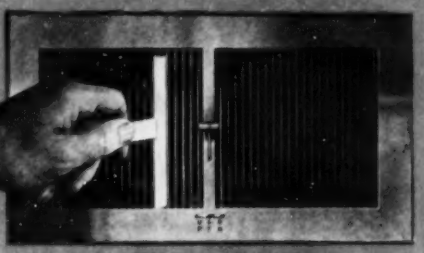
READ THIS:

1. Gives you a Power Shear that handles any length, needs no additional floor space, for a fraction of what even a foot-operated 8′ or 10′ shear would cost.
2. Fits all Lockformer Models 20, 22 and 24.
3. Is installed by anyone in 10 minutes.
4. Is as simple and fool-proof to operate as the Lockformer itself—is built to the same heavy-duty ruggedness.
5. Handles 20 gauge material and lighter.
6. Shears 30′ to 35′ per minute.
7. Shears as little as $\frac{1}{8}$″ from a sheet—or guide can be set as far back as 24″—handles *any* slitting job on material as wide as 48″.
8. Mechanically operated back gauge is always parallel to shear line.
9. Holds a tolerance to $\frac{1}{32}$″ on an 8′ sheet.
10. Will shear any length from less than 1″ to infinity.
11. Does not interfere with either built-in Pittsburgh rolls or auxiliary rolls.
12. Is as readily portable as the Lockformer itself—gives you, for the first time, a truly portable shear for actual "on the job" use.
13. Minimum sharpening expense (two small rolls instead of two large blades).

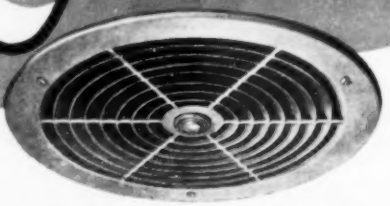
WRITE FOR FACTS AND PRICES...NOW!

THE LOCKFORMER CO., 4615 W. ROOSEVELT RD. CHICAGO 50, ILLINOIS

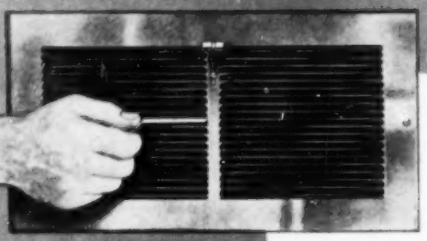
Like



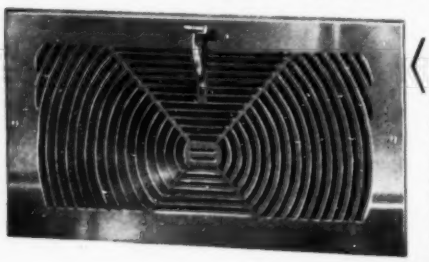
No. 75 For Air Conditioning at its best. The only register with the INCOMPARABLE TURNING BLADE VALVE.



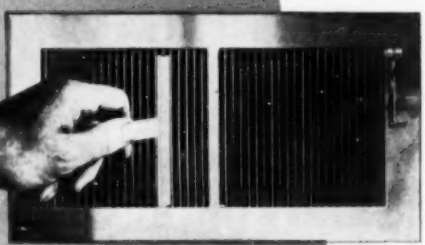
H&C Ceiling Diffuser — Neat, trim and efficient. Available in 5 popular sizes.



No. 74 A low-cost, high quality Air Conditioning Register to meet price competition without sacrificing customer good will.



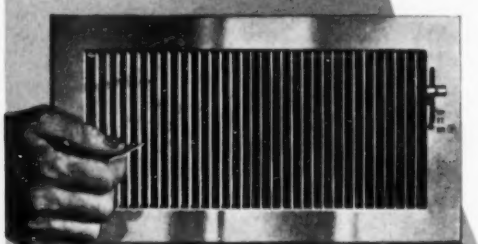
No. 40 "DIFFUSAIRE" — the only really practical Sidewall Register for perimeter heating. No. 4 Frame with No. 401 Diffuser constitutes an ideal two-piece out-of-wall installation.



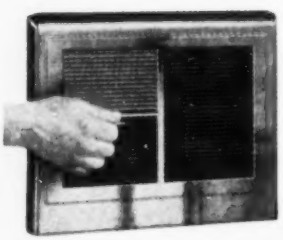
No. 76 Air Conditioning Register has Multi-shutter valve, flexible fin face. Particularly suited to shallow ducts.



No. 411 "DIFFUSAIRE" — provides unmatched efficiency and control of air distribution in floor installations for perimeter heating.

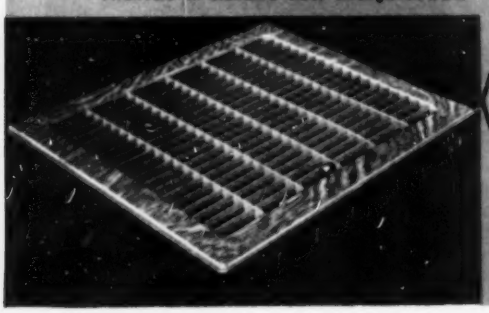


No. 88 Air Conditioning, Multi-shutter Registers and Grilles. Adjustable bar face. Available in standard sizes through 30 x 24.

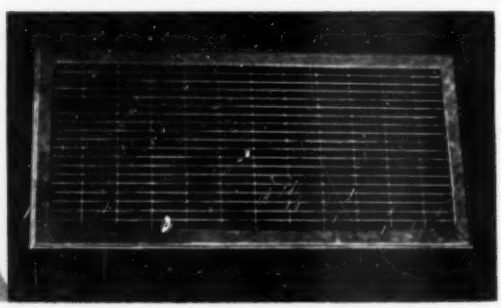


No. 130 Baseboard Register — tops for gravity or conversion jobs. Companion Sidewall Register — No. 330.

No. 265 "NO-FLEX" Return Air Intake — matches the No. 210. Large Free Area.



No. 210 "NO-FLEX" Finer Register — close mesh, exceedingly sturdy, one-piece margin, attractive appearance.



THOUSANDS OF OTHERS YOU, TOO, WILL SAY

It's MORE Convenient

. . . to buy from the source that offers the most complete line — an ideal register for each and every type of installation . . . That's H&C! Moreover, you will discover real convenience in the H&C method of packaging. Each item is individually packed in cartons, shipped in tough fibre containers in quantities small enough to be easily handled and shelved — convenient for the trade to buy in case lots.

It's MORE Profitable

. . . to use the finest registers available, for therein lies customer good will and added patronage. H&C products, in every class, are tops in efficiency and built to the highest standards of quality known in the industry.

It's MORE Satisfactory

. . . to deal with the concern which all through its long history has been noted for extending wholehearted cooperation on the smallest as well as the largest orders and the promptness with which it makes deliveries. Providing the best possible service under all conditions is a matter of pride with H&C. You, too, we believe, will find it more convenient, more profitable and more satisfactory

To Deal with H&C

MEMBER NATIONAL WARM AIR HEATING AND AIR CONDITIONING ASSOCIATION INDOOR COMFORT

Current catalog, No. 52, describes the complete register line as well as such furnace accessories as Manual Furnace Regulator Sets, Damper Regulator Sets, Damper Clips and Tips, Furnace Pulleys, Chain and Casing Clips.

See US AT THE CHICAGO EXPOSITION BOOTH 1025

HART & COOLEY MANUFACTURING CO.

500 EAST EIGHTH ST., HOLLAND, MICH.
In Canada Hart & Cooley Manufacturing Co., Fort Erie, Ontario

WORLD'S LARGEST and MOST PROGRESSIVE PRODUCERS OF REGISTERS and GRILLES

Take your choice.

A Complete Selection of registers with the "GALE-AIRE" 4½" system



"GALE-AIRE" Sidewall Register-and-Box Unit

The "Gale-Aire" Sidewall Register distributes air evenly in all directions along the wall. It will not cause drafts or blasts of hot air. Adjustable, it permits complete balancing at the registers, and has a positive shutoff without noise. A foam rubber gasket provides a positive seal between the register and register box.



"GALE-AIRE" Angle Baseboard Out-of-Wall Register

The "Gale-Aire" Angle Baseboard Register includes all the features of the Sidewall Register. Designed especially for older homes, it is installed by cutting an opening through the floor. No cuts in the wall are needed.



"GALE-AIRE" Floor Diffuser

The "Gale-Aire" Floor Diffuser was built in answer to the need for an inexpensive method of distributing air along outside walls. A fan-shaped diffusion pattern is achieved by vanes set at proper angles in the rectangular register.



PAT. PEND.

"Exploded" view of Char-Gale "Gale-Aire" Ceiling Diffuser, showing cylindrical register box, fitting ring, foam rubber gasket, and the register.

© CGM Co. 1953

AN INVITATION

Visit Booths 108 and 110 at the International Heating and Ventilating Exposition in Chicago, January 26-30. See the Char-Gale "Gale-Aire" System and Registers in action.

CHAR-

MANUFACTURING

. . with Char-Gale!

Complete Small Pipe Systems now offering 4 Methods of Air Diffusion

"GALE-AIRE" Ceiling Diffuser

Newest addition to the Char-Gale register line, the "Gale-Aire" Ceiling Diffuser provides effective air tempering and distribution by means of a well-designed cylindrical box and correctly proportioned rings in the register itself. The unit includes the box, fitting ring and register, complete with a foam rubber gasket.

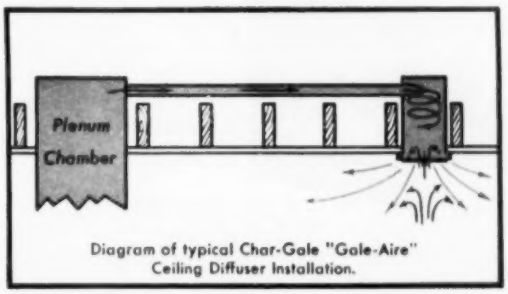


Diagram of typical Char-Gale "Gale-Aire" Ceiling Diffuser Installation.

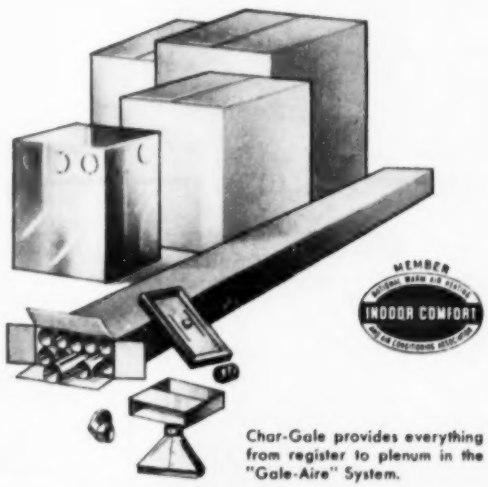
Unique Air Diffusion with the "GALE-AIRE" Ceiling Diffuser

Air entering the cylindrical register box of the Char-Gale "Gale-Aire" Ceiling Diffuser receives a circular, outward motion. This produces a partial vacuum in the center of the cylinder. Room air is drawn up into the box and blended with the heated air before it is expelled into the room. This tempering and blending of the heated air provides quick adjustments in room temperature with a gentle, pleasant movement of air.

The CHAR-GALE "GALE-AIRE" System

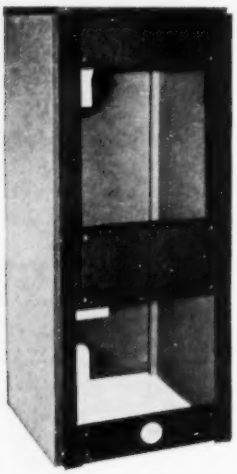
You can get *all* the material for your small pipe installations from Char-Gale. The plenum, 10-foot tubes, all fittings and connectors, as well as your choice of 4 types of registers are all available. They can be had either packed for complete jobs, or in cartons of individual fittings. And with a wide assortment of registers, Char-Gale offers you all the flexibility of installation you need.

Contact your jobber or write us direct.

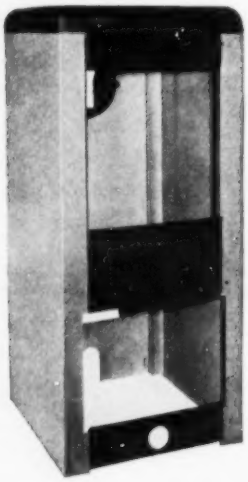


Char-Gale provides everything from register to plenum in the "Gale-Aire" System.

CHAR-GALE COMPANY
MINNEAPOLIS MINNESOTA



ECONOMY



QUALITY



DE LUXE



atlas
BOILER JACKETS
3
WAY WINNERS

ATLAS Boiler Jackets offer three important advantages to the manufacturer:

1 ATLAS special construction and low prices will reduce costs.

2 They will enhance the appearance of your product.

3 Improved product appearance will improve your sales.

ATLAS boiler jackets are custom-built to manufacturers' dimensional specifications. Jackets are of heavy gauge steel, with baked enamel finish and ready to install. No tooling costs are necessary on the three basic styles illustrated. ATLAS flush type boiler jackets are available in three types of construction.

Choose "ECONOMY" square-cornered jackets for cost saving, "QUALITY" with round cornered top for competitive pricing plus appearance, or "DE-LUXE" with fully round corners for your select dealer trade. You'll find any of the three the ultimate in appearance and value.

ATLAS also manufactures cabinets for heating, cooling and air conditioning units. For cost estimates, send specifications and requirements to:

Atlas
MANUFACTURING COMPANY
EUSTIS AT ROBBINS ST. • ST. PAUL, MINN.



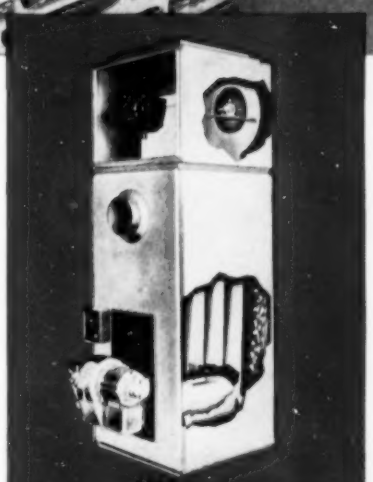
You, too, can follow the PREMIER PLAN *to greater Dealership Success*

AT THE START of this New Year, why not resolve to save yourself the grief that results from going it alone? You can enhance your own prestige, increase your sales, and improve your profits, by associating yourself with PREMIER — a name that inspires confidence and respect throughout the heating industry.

PREMIER's great Dealer Program is made to order for dealers like yourself, who want to make money and *stay independent.* PREMIER's year 'round line gives you handsomely finished, quality merchandise to sell at strictly competitive prices. Most important, PREMIER's Exclusive Franchise eliminates unfair competition and *protects your future.*



FREE PORTFOLIO — *Yours for the Asking* — Ready for distribution soon — a brand new portfolio and engineering guide showing the broad PREMIER line of home comfort equipment, including a sensational *new* packaged heating system that installs easier, quicker, and more economically than anything we have ever offered. Write now and reserve your copy of the portfolio. Be the first to learn about this completely new development in PREMIER engineering.



NEW! "CF" SERIES
COUNTER-FLOW

A highly compact unit that may be installed as a counter-flow system for perimeter heating, or as a conventional high-boy. Shipped completely assembled except for burner, combustion chamber and controls. Furnace body guaranteed for 10 years. Insulated cabinet. Minneapolis-Honeywell controls. PREMIER Buoyant-Flame Burner.

Premier FURNACE COMPANY
DOWAGIAC, MICHIGAN

Steel Furnaces • Winter Air Conditioners • Oil Burners • Gas Burners



Mayflower furnaces incorporate exclusive features that mean a better furnace for your customer at a lower cost. Available in gas, oil or coal, models range from 70 to 200,000 B.T.U.'s. Check these features. See why a *Mayflower* furnace is a better furnace in every way.

- A multi-flue system, exclusive with *Mayflower* only, incorporates tear-drop design for pre-heating air and cutting costly fuel bills.
- Gun and combustion chamber tray are installed as a unit. Installation is completed quicker, easier, and with more profit for you.

MAYFLOWER FURNACES.....

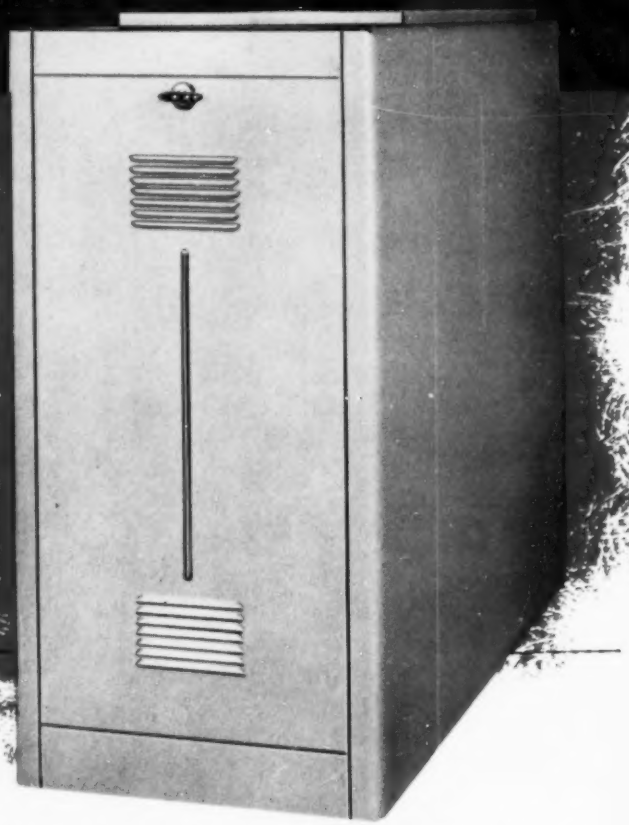
your customer is your best salesman!

Mayflower Furnaces . . . more profit 3 ways!

1. Mayflower's special firebrick tray eliminates costly and time consuming installations.

2. Mayflower Dealers find a Mayflower installation is a complaint-free installation. Avoids profit loss from re-occuring service calls.

3. Mayflower furnaces are high-quality low cost furnaces. Allow a greater profit margin.



The MAYFLOWER *"Lowboy". Available in nine models for gas and oil. Produces from 85,000 to 200,000 B.T.U.'s.*

"Please send me information and literature on *Mayflower* furnaces."

NAME_____

ADDRESS_____

CITY_____ P.O. ZONE_____

STATE_____

For complete information, literature and prices, clip out coupon and mail to . . .

MAYFLOWER

AIR-CONDITIONERS, INC.

Duluth Ave. & E. 7th, St. Paul 6, Minnesota

A Note to Remember

NIAGARA

MACHINES and TOOLS for 1953



SEE THEM! OPERATE THEM!

Learn how latest Niagara Machines and Tools save time, cut costs and produce quality work.

- Air Actuated Squaring Shears
- Electrically Driven Squaring Shears
- Foot Operated Squaring Shears
- Air Actuated Bar Folders
- Multi-drive Power Table for rotary operations
- High Speed Circle Shears
- Universal Rotary Machines
- Power Slip Roll Formers
- Hand Tools



Ask for Latest Niagara Bulletins At The Show or By Mail

NIAGARA MACHINE & TOOL WORKS • BUFFALO 11, N. Y.

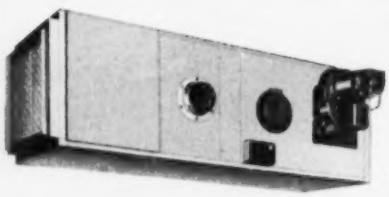
America's Most Complete Line of Presses, Shears, Machines and Tools for Sheet Metal Work

DISTRICT OFFICES: DETROIT • CLEVELAND • NEW YORK • PHILADELPHIA

Dealers in principal U. S. cities and major foreign countries

NOW! YOU CAN BUY FOR COMPLETE HEATING ONE SOURCE —

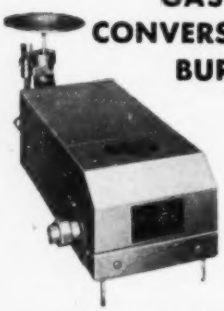
ALSO - Added Profit Opportunity with these 3 NEW MONCRIEF Products for '53



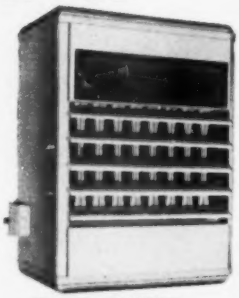
HORIZONTAL FURNACE

With Gun Type Oil Burner
84,000 B. T. U. Output
Smartly styled, enameled casing
Built for years of trouble-free operation.
Attractively Priced.

GAS CONVERSION BURNER



3 most Popular Sizes
150,000, 200,000, 300,000
B.T.U. inputs
Unusually Compact . . .
Unusually Accessible
Priced for Competition



GAS UNIT HEATER

4 most Popular Sizes
60,000, 90,000,
115,000, 170,000
B.T.U. inputs
Smartly Styled . . .
Distinctive Features

Literature on these NEW Units is now available! SEE—or write for the name of your MONCRIEF jobber.

Plus MONCRIEF SUREFIT CARTON PACKED FITTINGS

FOR—Small Pipe, Perimeter: Extended Plenum Installations . . . IN-Basement; Crawl Space; Slab Floor and Utility Room Installation . . . ALSO—Moncrief Carton Packed, Snap Lock Round Pipe; Snap Lock Wall Stack; Snap Lock Duct . . . QUICKER to Assemble—EASIER to Handle—QUICKER to Install



"A"
No. PH 2
Register Tee



"B"
No. PH 3
End Register Box

Write for complete catalogs of MONCRIEF heating equipment

EVERYTHING

INSTALLATIONS FROM

MONCRIEF!

GRAVITY FURNACES
GAS or OIL FIRED • COAL FIRED

UTILITY AIR CONDITIONING UNITS
EITHER GAS or OIL FIRED

BASEMENT AIR CONDITIONING UNITS
GAS or OIL FIRED • COAL FIRED

COUNTERFLOW UNITS
FOR PERIMETER OR CRAWL SPACE
EITHER GAS or OIL FIRED

with UNITS APPROVED for EITHER GAS or OIL FIRING AND a Type and Size to Fit ANY HEATING REQUIREMENT!

If it's any type of Heating Unit—Gravity . . . Forced Air . . . or Perimeter heating—Moncrief builds it.

If it's for Basement—Utility Room—Slab Floor . . . or Crawl Space installation—Moncrief builds it.

If it's for a Conventional . . . Extended Plenum . . . or Small Pipe installation—Moncrief makes every type of fitting and—carton packed at no extra cost to you.

If it's Wall Stack . . . Duct . . . or Warm Air Round Pipe—Moncrief makes them all with Snap Lock Construction and—they are also carton packed at no extra cost to you.

So—no matter what your customer demands for any heating installation you can fill the complete order from one source—Moncrief.

Remember—Moncrief's been tops in the heating field for over 50 years—so build *your* future with Moncrief.

See our display Booth No. 406 at the 11th Heating and Ventilating Exposition, Chicago Jan. 26 to 30.

BASEMENT A.C. UNITS



As a GAS Unit
70,000 to 250,000
B.T.U. Input



As an OIL Unit
76,000 to 212,000
B.T.U. at Bonnet

Approved for Either Gas or Oil
WITH STEEL HEATING ELEMENTS

COUNTERFLOW UNIT



As an Oil Unit
75,100 to 84,100
B.T.U. at Discharge Outlet



As a Gas Unit
93,000 to 115,000
B.T.U. Input

UTILITY A.C. UNIT

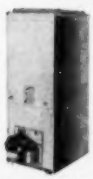


As an Oil Unit
75,100 to 106,000
B.T.U. at Bonnet



As a Gas Unit
95,000 to 125,000
B.T.U. Input

GRAVITY FURNACE

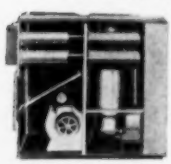


As an Oil Unit
71,200 to 100,000
B.T.U. at Bonnet



As a Gas Unit
85,000 to 130,000
B.T.U. Input

BASEMENT A.C. UNITS



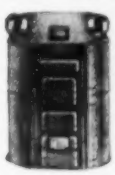
90,000 to 200,000
B.T.U. Input
Cast Iron Element
for Gas Only



Coal Fired
Air Conditioning
Unit Steel Element
86,642 to 127,633
B.T.U. at Register



Cast Iron
Gravity Furnace
20" to 28" Firepot



Steel
Gravity Furnace
20" to 34" Drum

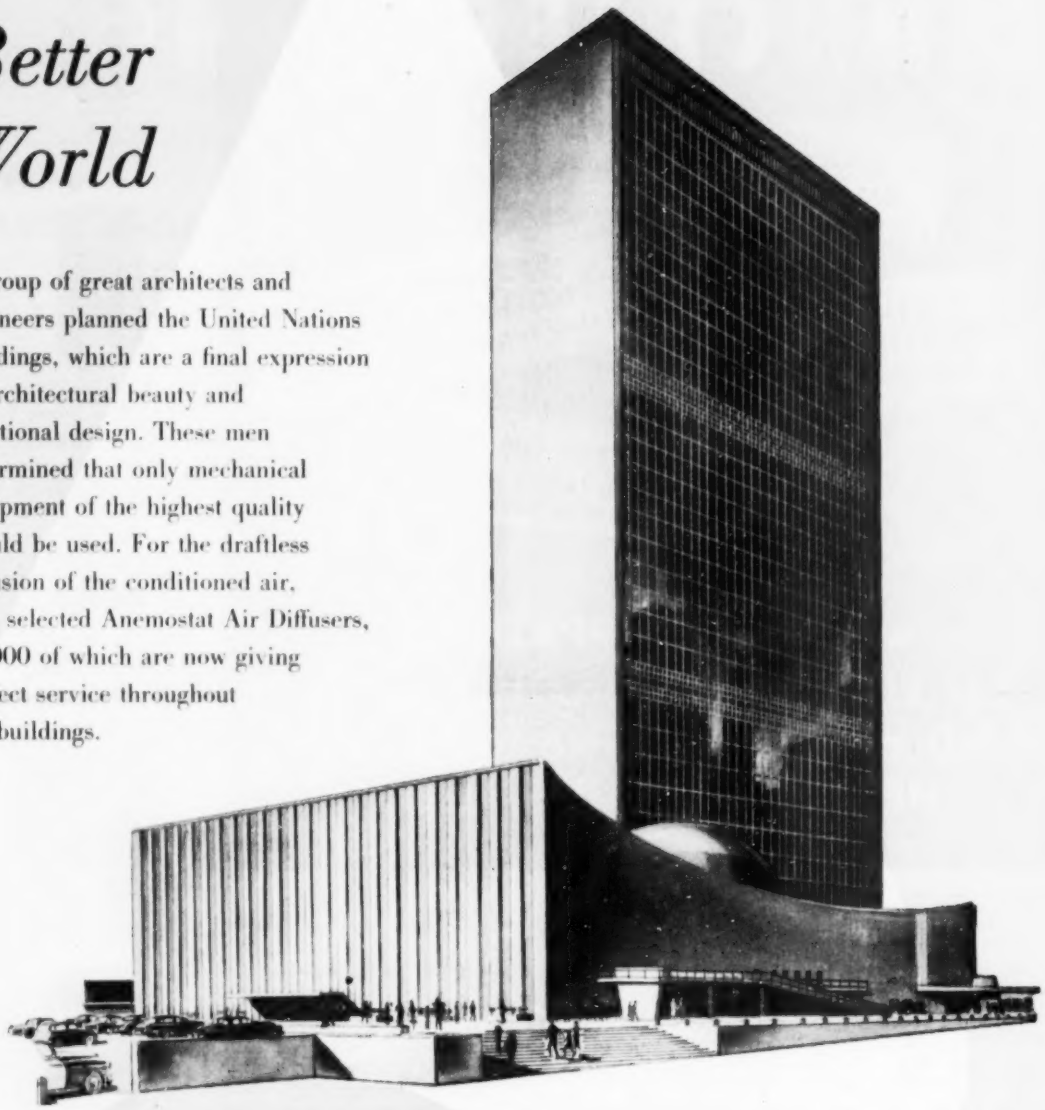
PIPELESS FURNACES
18" to 24" Firepot

THE HENRY FURNACE COMPANY • *Medina, Ohio*

HEATING AND AIR CONDITIONING UNITS — MONCRIEF SINCE 1895 — FURNACE PIPE AND FITTINGS

Plans for a Better World

A group of great architects and engineers planned the United Nations buildings, which are a final expression of architectural beauty and functional design. These men determined that only mechanical equipment of the highest quality should be used. For the draftless diffusion of the conditioned air, they selected Anemostat Air Diffusers, 12,000 of which are now giving perfect service throughout the buildings.



"No Air Conditioning System Is Better Than Its Air Distribution"

ANEMOSTAT®

DRAFTLESS *Aspirating* **AIR DIFFUSERS**

ANEMOSTAT CORPORATION OF AMERICA

10 EAST 39th STREET, NEW YORK 16, N. Y.

REPRESENTATIVES IN PRINCIPAL CITIES

NEW LOW COST ZONE CONTROL SYSTEM ANNOUNCED

Puts Heat Where It's Needed, When It's Needed



A zone control system using these economical, easy to install Crise Zonetrol units is the ideal way to zone heat to nurseries, invalids' rooms, exposed rooms and throughout multiple dwellings.

Alert dealers now have a profitable answer for home owners and landlords of multiple dwellings who complain about hard-to-heat rooms. They are selling *zone control systems* using low cost, easy to install Crise Zonetrol units.

These Zonetrol units automatically open or close the duct dampers of any forced warm air heating system in response to thermostatic temperature control. When the thermostat in any zone calls for heat, the respective motor opens the damper of that zone and at the same time closes a built-in switch which then starts the automatic heating equipment. Any reasonable number of Crise Zonetrols (two or more) can be used to control as many zones as may be required.

The economy of this system results from the fact that each Zonetrol is a complete unit—no master control, no power box, no transformer is required. A built-in low voltage control circuit eliminates the need for the extra transformer. Wiring, too, is simplified since no multiple relays are involved.

Enthusiastic dealers hail the Crise Zonetrol as the first practical, foolproof zone control system that can be installed at reasonable cost. And they are being returned a generous profit margin on both the units and their labor.

For additional facts on this sure-fire way to build a profitable volume, see your wholesaler or write Crise Controls Division, Acro Manufacturing Company, Columbus 16, Ohio.

SAVE MONEY... MAKE MONEY



WHY BUY 2 OR 3—
WHEN ONE DOES THE JOB *with economy!*

VERSATILE You'll save money on inventory when you stock new Crise controls. That's because their flexibility in application permits you to carry fewer types on the shelf. For example Type FOL-60 can be used either as a warm air limit control or a fan control. And Type FAL-10A has a triple function (1) safety hi-limit (2) winter fan (3) summer ventilation.

SAVE ON THE JOB By carrying only a few *multi-purpose* Crise controls on the truck, installation men are always sure to have the right unit at hand.

EASY TO INSTALL Crise controls are small, compact, easy-to-handle. Ample space is provided for internal wiring. For added convenience, scale settings and thermal temperatures are visible through the lucite dial face.

Write today for a copy of our latest catalog and price list.

CRISE CONTROLS DIVISION
ACRO MANUFACTURING CO.
COLUMBUS 16, OHIO



ROYAL HEATERS, INC.

Alhambra, California • CUmberland 3-2117

Visit our booth at the **11th International Heating and Ventilating Exposition — Booth 529**



Royal Heaters has a sales record unparalielled in the heating industry.
This record was made with a limited range of equipment.
Now for the first time a dealer can have a complete line of equipment.
All new, all advanced, with sales features that will add up to larger profits.
Dealerships are open. Phone or write us today.



MILCOR* Announces a great, new catalog-pricing service . . .

Never before a business-builder like this! A complete book of illustrated selling data! Will help you move a lot more Milcor Rain-Carrying, Heating and Roofing Products!

If you're a recognized dealer in the building industry, you can't afford to be without this Milcor Master Catalog and Pricing Service! It's a valuable and powerful sales tool that includes *all* the product data you need to close sales on Milcor Sheet Metal Products.

It's a complete *program* that includes catalog data, *list* prices, and an accurately keyed reference for up-to-the-minute *net* prices! This pricing data will be *kept current* on a prompt, continuous basis!

If you are a recognized dealer, send the coupon below for your *free* copy of the Milcor Master Catalog. Don't let this opportunity go by, for this catalog will soon be off the press! Be sure to get your copy!

For real selling power there's nothing like Milcor Master Catalog No. 500. Send for your copy!

INLAND STEEL PRODUCTS COMPANY

*Reg. U. S. Pat. Off.

MAIL THIS COUPON *today!*

INLAND STEEL PRODUCTS COMPANY
4023 W. Burnham St., Milwaukee 1, Wisconsin

Send Me Milcor Master Catalog No. 500

Name _____

Position _____

Company _____

Address _____

City _____ Zone (___) State _____

S-111

News Round-Up



Dollar Volume of '53 Construction To Equal '52

A DOLLAR VOLUME of construction in 1953 "practically equal" to that of booming 1952 is foreseen by F. W. Dodge Corp., in its annual advance estimates published late each year.

The advance estimates apply to the 37 eastern states covered by Dodge construction news gatherers, and are accepted by the industry as a factual basis for 48-state construction indexes.

It is believed that by the end of the year, contracts awarded will have reached 16,008 million in all categories of construction, and the estimate is that the 1953 total will be 16,020 million, a change of virtually zero. The article says:

Changes in dollar volume of residential building as between 1953 and 1952, are estimated as down 11 per cent; total building, down 2 per cent. Dollar volume of private building and engineering contracts is expected to decrease 7 per cent; public buildings and engineering contracts are expected to increase by 10 per cent.

Report 1952 Room Air Conditioner Sales

THE AIR CONDITIONING and Refrigerating Machinery Association has released its estimates of manufacturers' shipments and distributors' sales in 1952.

These estimates include shipments by all manufacturers, both ACRMA member-companies and non-members. The figures for 1951 are manufacturers' shipments as reported to the Bureau of the Census.

	NO. OF UNITS	
YEAR	window	console type
1952	330,770	10,230
1951	228,964	8,526
	SALES VALUE	
1952	$61,755,000	$4,425,000
1951	42,442,000	3,382,000

Based on a comparison of manufacturer and distributor inventories at the beginning of 1952 and inventories near the close of the year, 412,000 room air conditioning units are estimated to have moved into dealer hands during the year. The 412,000 unit figure is believed to at least approximate the actual sales of room air conditioners to users during 1952. Dealer stocks at the end of the year were known to be substantially less than in January, 1952, but actual figures were not available.

OK Coal Research Laboratory

AT ITS ANNUAL budget meeting, the board of directors of Bituminous Coal Research, Inc., Pittsburgh, authorized the operation of an industry research laboratory.

The board instructed the officers to lease a building in Columbus, Ohio, to house the Columbus staff of the organization and to provide facilities for design, development, and pilot-plant testing of equipment and processes being investigated under BCR's General Research Program.

Research during 1953 will be conducted to increase user satisfaction in residential and other markets. Research on coal-burning equipment for residential uses will be intensified.

Expect Minor Changes in Business Trend

ONLY MINOR changes in over-all business trends are expected by a majority of a panel of 137 of the nation's leading economists recently polled by F. W. Dodge Corp.

High-level stability is expected to characterize general business conditions through most of next year, with the possibility of a quite mild set-back in the second half.

Roughly half the economists are in business or financial firms; the others are university teachers, private consultants or government men. In the main, they based their forecasts on the assumption that the cold war would continue on its present scale.

Total output of goods and services, sometimes defined as gross national product, is expected by a majority to increase moderately during the first half of next year and to recede moderately during the second half. The median estimate is $348.2 billions for 1953 as compared with an estimated final total of $344.1 billions for 1952.

Moderately declining prices are expected. Little change is expected in wage scales, and that on the upward side.

Giant Blast Furnaces Near Completion

FIVE GIGANTIC new blast furnaces were brought into operation in this country in the first 10 months of 1952, two more were scheduled to go into blast before the end of 1952 and 11 other units are being advanced toward completion in the first half of 1953, American

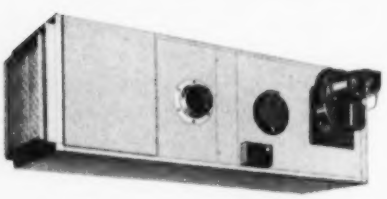
(Please turn to Page 32)

NOW! . . . More

Greater Selling Power!
Greater Customer Appeal!

3 New-Important Luxaire® sales-getters for '53

Ready for the heating market after exhaustive laboratory and operating tests



Luxaire OIL FIRED
HORIZONTAL UNIT

Low in cost. . .Attractively styled. . .quiet operation. . .

84,000 B. T. U. output

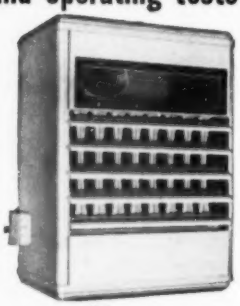
For Attic—for Crawl Space—for all types of suspended installations in homes, factories, warehouses.

Luxaire GAS CONVERSION BURNER



Made in the 3 popular sizes. . . Cast Iron and stainless steel burner parts. . . 150,000, 200,000, 300,000 B.T.U. Inputs.

Also available with push button lighter.



Luxaire GAS FIRED UNIT HEATER

Rugged heating elements. . . Ribbon burners. . . Accessible for inspection or servicing—4 sizes 60,000, 90,000, 115,000, 170,000 B. T. U. Inputs.

Send for literature on these easy-to-sell Luxaire units and the name of your Luxaire jobber.

See our display Booth No. 406 at the 11th International Heating & Ventilating Exposition Jan. 26 to 30.

Complete than Ever

Luxaire® for '53

The Complete Line of Heating Equipment
APPROVED for GAS..APPROVED for OIL
With a Type and Size to Fit Practically ANY Heating Installation

LUXAIRE for '53 is headline news in the heating industry.
Never before has so extensive a line of warm air heating equipment with such selling power—such customer appeal been offered for your business-building program.
With Luxaire for '53 you have a complete line of heating and air conditioning equipment that will fit practically any gravity, forced air or perimeter heating installation. Many Luxaire units have the outstanding advantage of being approved for either gas or oil firing and with equal efficiency with either fuel.
With Luxaire for '53 you are set to more than meet any kind of competition.
SO—get set with Luxaire for '53 for increased sales—increased profits. Take full advantage of this outstanding, opportunity-line of heating equipment. Get in touch with your nearest Luxaire jobber.

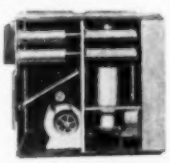
Basement Air Conditioning Units



As a GAS UNIT
70,000 to 250,000
B.T.U. Input



As an OIL UNIT
76,000 to 212,000
B.T.U. at Bonnet



90,000 to 200,000
B.T.U. Input
Cast Iron Element

Approved for Either Gas or Oil
WITH STEEL HEATING ELEMENTS

for Gas Only

Counterflow Unit



As an Oil Unit
75,100 to 84,000
B.T.U. at Discharge
Outlet



As a Gas Unit
65,000 to 115,000
B.T.U. Input

3 in 1 Air Conditioning Unit



Steel Element
86,642 to 127,633
B.T.U. at Register

Utility A.C. Unit



As an Oil Unit
75,100 to 106,000
B.T.U. at Bonnet

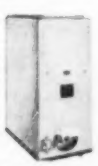


As a Gas Unit
65,000 to 125,000
B.T.U. Input

Gravity Furnace



As an Oil Unit
71,200 to 100,000
B.T.U. at Bonnet



As a Gas Unit
85,000 to 130,000
B.T.U. Input

Coal Fired Units



Steel
Gravity Furnace
20" to 34" Drum



Cast Iron
Gravity Furnace
20" to 28" Firepot

THE Luxaire C. A. OLSEN MANUFACTURING COMPANY • • ELYRIA, OHIO
HEATING & AIR CONDITIONING UNITS

News Round-Up



(*Continued from Page 29*)

Iron and Steel Institute has announced.

Never before have so many new furnaces been built at one time. Simultaneously, improvements have been and are being made to increase the output of a number of older furnaces. All-told, this phase of steel expansion is the greatest and most costly ever undertaken in a short term during the entire history of the industry.

The output of the blast furnaces will be used largely in the manufacture of steel, although additional pig iron also will be available for foundries.

The five large new furnaces brought into operation by October of 1952 added about 2,300,000 tons of annual blast furnace capacity to the national total. The two additional furnaces scheduled to go into blast by the end of 1952 have a combined capacity of about 870,000 net tons.

The 11 furnaces scheduled for completion in the first half of 1953 have a combined annual capacity of about 4 million tons of pig iron. Three or four of these furnaces will replace older units, however.

To Hold Industrial Ventilation Conference

THE SECOND annual Industrial Ventilation Conference, developed cooperatively by the Division of Industrial Health, Michigan Dept. of Health, and the School of Engineering, Michigan State College, will be held at East Lansing on Feb. 16 to 19. Much of the time will be spent in classrooms working out an industrial ventilation problem. Papers presented will include: *Velocities — Control-Slot and Carrying*, Jack Baliff; *Effect of Fittings on Operation*, Roger Browne, Jr.; and *Fan Problems*, Vic John. The last session, from 9:30 to 11:30 on Feb. 19th, will cover *How to Maintain Maximum Efficiency*.

For further information write Industrial Ventilation Conference, Continuing Education Service, Michigan State College, East Lansing.

Sees Need To Revamp Marketing Efforts

FAR TOO MANY companies are still gearing their marketing efforts to early postwar patterns, completely overlooking significant shifts which did not appear until the last two years. These shifts deserve closest attention right now when companies are adjusting sales quotas, advertising budgets and territory coverage in preparation for the 1953 sales effort. These were the findings of Dr. Henry Bund, Research Institute of America, who has recently completed his analysis of a detailed survey of market trends in the United States.

Major forces which were found to justify a detailed examination of local and regional markets include: expansion of defense-supporting industries, the relocation of warehouses and branches nearer to mass markets, radical changes in the makeup of consumer markets, and the challenge offered to all marketers as the full potentials of electrification and mechanization become apparent in the farm markets.

Sales planning at this time must be geared to sectional variations along with national and regional area plans.

Increase in Steel Production

In 1952 the ever growing iron and steel industry of the United States increased its capacity to a record high level and had its third highest production year despite a prolonged work stoppage.

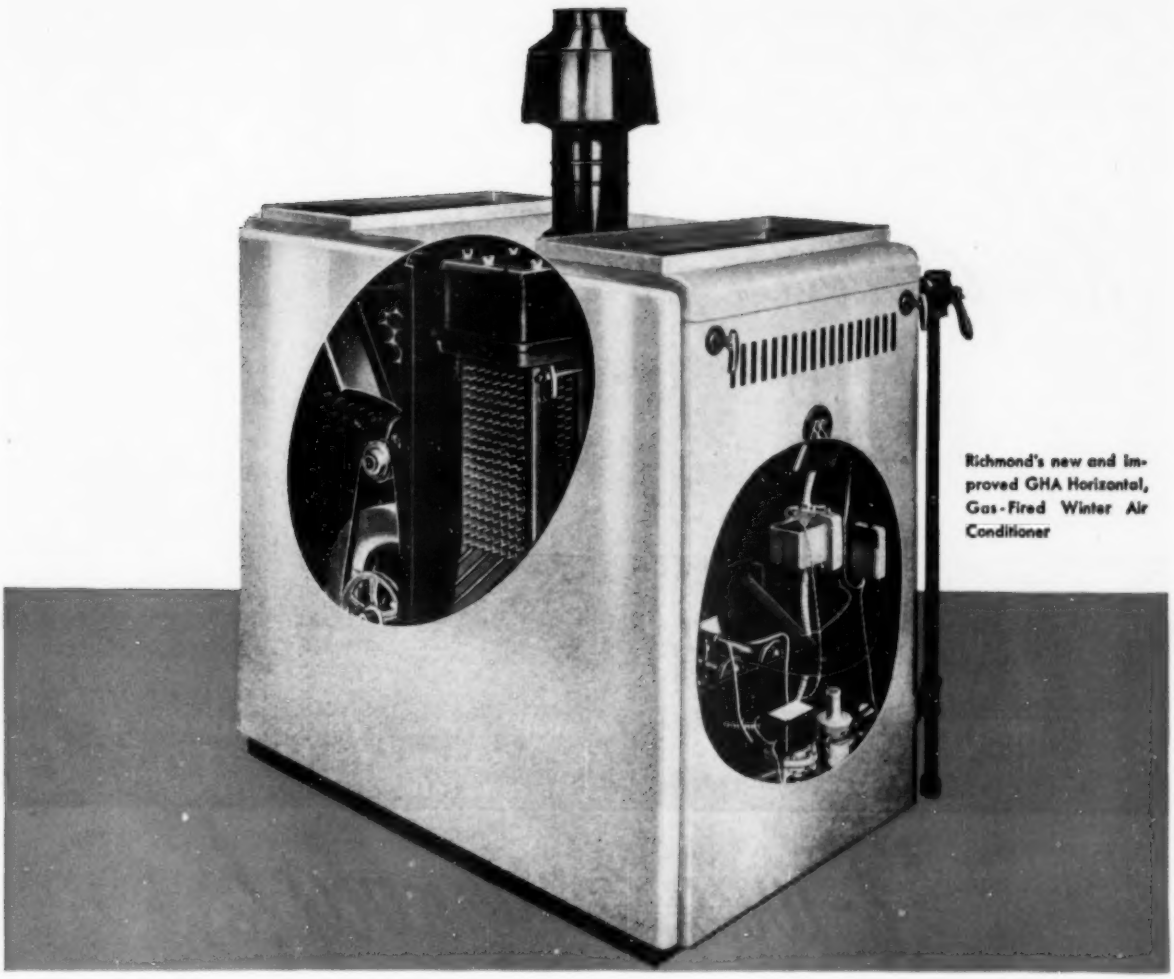
The output of steel reached levels higher than ever before in the latter part of the year, thereby bringing steel supply and demand in balance or better.

The industry maintained its world leadership by a wide margin in 1952. It produced 93 million tons of ingots and steel for castings, which far exceeded the output of any other country, although that total was 12 million tons below its record high 1951 production because of the long work stoppage in the summer.

As in other recent years, most of the steel made in 1952 went into uses normally regarded as part of the civilian economy.

The increase in capacity under the steel companies' large scale programs of expansion and improvement was significant. The precise amount of the gain will be announced later. The capacity is expected to rise to 115 or 116 million tons. This is indicated by the industry's record high October output of 9.8 million tons, equivalent to an annual production of about 116 million tons. New and improved facilities helped to make that record possible. At the start of 1952, the industry's annual rated capacity was 108.6 million tons, an increase of more than 17 million tons in five years.

The high production of recent months and the expansion of iron and steel plants will continue into 1953. Direct defense requirements for steel in 1953, including atomic energy, are not expected to exceed 14 million tons of ingots, or about 12 per cent of an anticipated output of close to 119 million tons, according to the Steel Industry Advisory Committee in Washington.



Richmond's new and improved GHA Horizontal, Gas-Fired Winter Air Conditioner

A Fine Unit Now Made Even Finer!

Now the popular Richmond GHA will deliver more heat more efficiently than ever before. Thanks to a new sectionalized heating element, with easily removable individual burners for each replaceable section . . . all designed to produce maximum heating performance.

Other GHA features include: cast-iron heat exchanger for longer life and greater resistance to corrosion . . . new single-unit design for installation on combustible floors . . . handsome white enamel jacket . . . full range of sizes (single: 75,000 to 175,000 input BTU/hr.; twin: 200,000 to 300,000 input BTU/hr.) . . . fully approved by the AGA.

For small, medium and large homes where quality is desired, use this new and improved GHA unit.

RICHMOND PLUMBING & HEATING

RICHMOND

RICHMOND RADIATOR CO.—AFFILIATE OF REYNOLDS METALS CO.

See your wholesaler or Sell Coupon Today.

AA-1

Richmond Radiator Company
19 East 47th Street, New York 17, New York

Please send me more information and literature on the Richmond GHA Unit. No obligation, of course.

NAME .....

COMPANY .....

ADDRESS .....

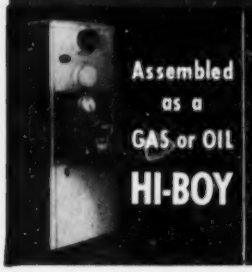
CITY ..... ZONE ..... STATE .....

We are ☐ plumbing wholesalers ☐ plumbing contractors ☐ building contractors.

the Halco DU-ALL A-10

Now approved for GAS!

THE A-10 AND A-12 DU-ALL UNITS NOW AVAILABLE FOR EITHER GAS OR OIL!



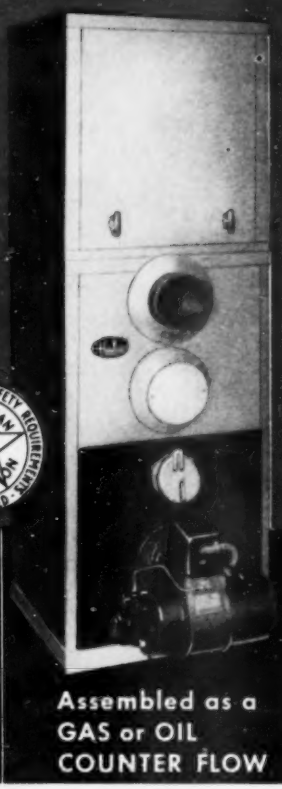
Assembled as a GAS or OIL **HI-BOY**



Assembled as a GAS or OIL Basement Unit



Assembled as a Suspended Unit Oil Fired Only



Assembled as a GAS or OIL COUNTER FLOW

7-way assembly!

CHECK THESE ADVANTAGES...

1. Two Sizes, A-10 and A-12 with Bonnet deliveries of 80,000 and 120,000 B.T.U.
2. Why stock 14 furnaces when TWO will do?
3. Easily converted from OIL to GAS.
4. Make conversion for $15 with Halco Exchange Burner Plan.
5. Compact, designed for small space installation.
6. Approved for Dual Fuel, City Gas with propane as stand-by.
7. Fast installation. (A-10 shipped assembled.)
8. Easy access to Burner and Blower. Blower on removable shelf.
9. Unique design assures efficiency *plus versatility.*
10. *SLASH* Inventory and *FILL ORDERS!*

Write us... for Complete Literature and Prices TODAY!

BUILDERS OF QUALITY FURNACES SINCE 1890

HALL-NEAL FURNACE CO.

1322-42 NORTH CAPITOL AVE., INDIANAPOLIS 7, IND.

a complete... LINE
a quality... LINE
a profit..... LINE

VICTOR

QUALITY FURNACES SINCE 1890



A VICTOR FRANCHISE

- Guarantees you a generous EXCLUSIVE territory
- The only furnace with patented fuel-saving FINS
- A line of nearly 100 GAS, OIL, and COAL sizes and models
- A line with more exclusive features of genuine merit
- Victor "FIN" Furnaces are sold under no other name
- A complete line of blowers, conversion burners, and accessories
- Get out of the competitive class . . . *WRITE US TODAY*

the furnace with the patented **FUEL SAVING** -FINS

GAS LOW BOYS	OIL LOW BOYS	COAL FORCED AIR
GAS HI-BOYS	OIL HI-BOYS	COAL GRAVITY
GAS GRAVITY	OIL GRAVITY	COAL STOKER MODELS

SIZES FROM 55,000 TO 500,000 BTU

MANUFACTURERS OF THE QUALITY VICTOR AND HALCO FURNACES

HALL-NEAL FURNACE CO.
1322-42 NORTH CAPITOL AVE., INDIANAPOLIS 7, IND.

Syncromatic
WARM AIR FURNACES

Syncromatic

THE FINEST IN HOME HEATING

Booth No. 721

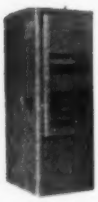
FOR OIL A complete line of oil fired furnaces incorporating the famous *SYNCRO-MATIC* counterflow heat exchanger principle, the ultimate in efficiency. Outputs from 85- to 250,000 B.T.U's. at bonnet with the *SYNCROMATIC* oil burner. Also available is the *SYNCROMATIC* Lo-Flo burner which burns from .55gph to one gallon per hour with the same nozzle. The "500" series can be easily converted from oil to gas with a conversion kit. Available in Counterflow Hi-Boy or Lo-Boy models.


"700" series


"500" series


"900" series

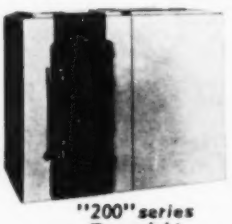
FOR GAS A factory assembled, wired and tested line of gas furnaces up to 145,000 B.T.U's. input. Heat exchangers are built of heavy 12 Ga. steel. Years of research have been expended to make these furnaces the leader in value. Perfectly engineered operation has produced quiet ignition and burning characteristics using all gases.


GFU Hi-Boy


GF Lo-Boy


"500" series

FOR COAL A revolutionary design in a coal burning furnace that not only produces amazing operational efficiencies but is the perfect furnace for conversion to automatic with gas or oil. Efficiencies obtained with automatic firing equal or better those possible with furnaces built only for automatic firing. Available in forced air or gravity.


"200" series Forced Air


"200" series Gravity

For information and specifications on the complete line write or call.....

Syncromatic Corporation

WATERTOWN, WISCONSIN

Manufacturers of fine heating equipment for nearly a quarter century.

1-5-3

Syncromatic
WARM AIR FURNACES

Syncromatic

THE BEST IN COMMERCIAL HEATING

Booth No. 721

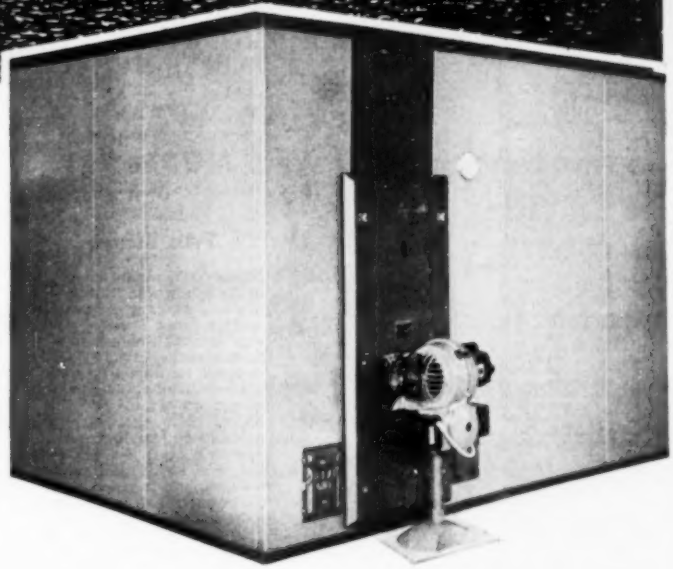
HI-CAP
HIGH CAPACITY

FOR

SCHOOLS
CHURCHES
GARAGES
STORES
HOMES
APARTMENTS
WAREHOUSES
FACTORIES

330,000 to 1,000,000 B.T.U. – FOR

OIL—GAS—COAL



America's most adaptable commercial warm air furnace. It's double welded 3–16" plate assures long life. The design completely prevents hot spots. Easy to assemble – Can be taken thru 36" doorways. No expansion noises is a real feature. Low stack temperatures mean excellent efficiencies. Practically no mechanical service needed. For you – a real profit. For your customer years of fuel savings.

For complete specifications and information on special applications write or call.....

Syncromatic Corporation
WATERTOWN, WISCONSIN

Manufacturers of fine heating equipment for nearly a quarter century.

1–5–3

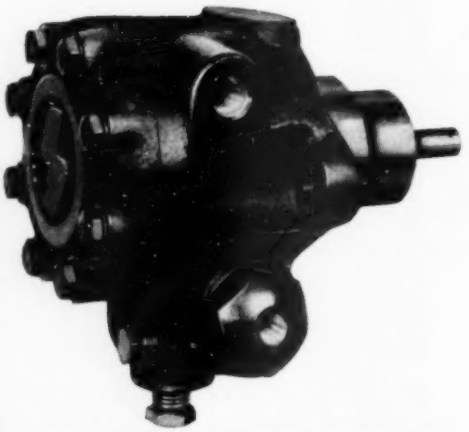


Two basic SUNDSTRAND models solve all your fuel unit problems!

Single Stage

Designed by Sundstrand for better, quieter performance and simplified field service, the Model "J" *Single Stage* Unit features these engineering advances: (1) small and compact, (2) precision-made hydraulically equalized pumping members, (3) positive-seating strainer, easily removed for cleaning, (4) leakproof seal, (5) long shaft bearing, (6) balanced, positive-acting valve, (7) interchangeable parts and mounting. In addition each unit is individually tested and certified before leaving the plant. Model "J" is available in 5 nozzle capacities . . . 3, 6, 10, 14 and 20 gph.

MODEL "J"

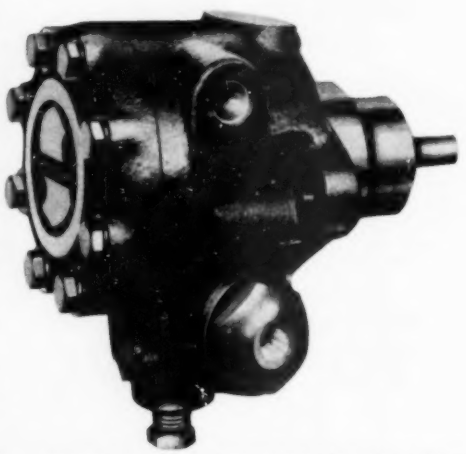


MODEL "J" WITH OR WITHOUT SOLENOID VALVE

Two Stage

Model "H", newest member of the Sundstrand "family"—is a self-purging, compact, easily serviced *Two-Stage* fuel unit with the same simplified porting as the Model "J" . . . designed for use on two-pipe systems having vacuum requirements up to 20". The Model "H" has already proved itself an outstanding, quiet operating, dependable unit for long line, high lift oil burner installations. It incorporates the same fine engineering features as the Model "J". The "H" is available for 3, 6, 10, 14, and 20 gph firing rates—6, 10, 15, 20 gph strainer capacities. Model "H" is interchangeable with Sundstrand Models S-1, R, J, or K.

MODEL "H"



MODEL "H" WITH OR WITHOUT SOLENOID VALVE

INDIVIDUALLY TESTED AND CERTIFIED

SUNDSTRAND

SUNDSTRAND FUEL UNITS

SUNDSTRAND MACHINE TOOL CO.

HYDRAULIC DIVISION, ROCKFORD, ILL.



Arnold Kruckman's

Washington Letter

Pros and Cons of Decontrol Being Discussed

THE COLLAPSE of the Wage Stabilization Board in December was simply a dramatic example of what was going on in the human structure of the Truman administration. It was falling apart all over Washington, and probably elsewhere wherever the government has offices. OPS, NPA, ODM, DPA and other emergency agencies continued to issue releases, and documents that seemed to be evidence of active operation. But actually what happened was perfunctory. In OPS many of those in charge regarded the orders that were issued as gestures. A responsible official told a business man who applied for relief that there was plenty of steel and that all he had to do was to go out and buy it. Officials in NPA frankly told you that they were marking time. Few persons in any emergency agency knew what might happen.

Wherever you went you found that responsible officials of the emergency government regarded controls as virtually dead. Edward I. Phelps, Jr., assistant director of OPS, in a well reasoned document, recommended complete suspension of all wage and price controls by March 1. He excepted only petroleum, primary metals, some machinery items and eight other broad categories. Representative Jesse P. Wolcott, the new chairman of the House Banking Committee, confidently predicted congress will let price, wage and rent controls die April 30, and that controls on all but two vital materials will end soon after congress convenes. Senator Barry Goldwater, the new man from Arizona, came out for the immediate suspension of controls. Charles Murphy, one of the most thorough of the White House counsellors, made a study for Mr. Truman of the best method of putting decontrol into operation.

Steel, almost every responsible official in Washington will tell you, is so abundant that you should be able to get whatever you want. But when you make closer inquiries you find they mean that the 120 million tons that will be produced during 1953 will result in a complete supply for the military, and other defense-supporting industries. They tell you that the abundant supply means the producing facilities have caught up with defense needs, plus whatever may be necessary for domestic needs. But at the same time they point out that consumer goods, the small type of article, the novelties, have had scarcely any steel during the months past, and these steel-consuming manufacturers should be able to get more metal. What they really mean here in Washington is not that steel will be so abundant that everyone can get what he wishes, but that it will be easier, and steadily grow easier, if developments in Asia do not demand a sizable increase in supply of steel.

Report Small Firms Can't Get Steel

Representative Wright Patman's House Small Business Committtee reports that it continues to hear from small firms that they can't get steel. On the other hand it has received information that secondary steel products are in abundant supply in warehouses. The committee reports this is particularly true of those types of tin mill products which fall into the secondary category. The committee defines secondary steel as any item of regular or second quality carbon steel and carbon steel shearings which are usually sold by producers at lower prices than such items of prime steel. Patman's committee feels this supply is a valuable source for small business concerns, and in its own words "the committee sees no justifiable reason for withholding decontrol on this material until the details of a general decontrol of steel are formulated. . . . Current controls on the *production* and *distribution* of most types of steel are unrealistic. It is believed that every consideration should be given in the current steel decontrol discussions to lifting these controls at the end of the first quarter of 1953. In the event of such action, supplies for military and atomic energy programs might be provided through the issuance of directives."

Steel Decontrol May Mean Higher Costs

And that brings you up against the opinion of many people who have made objective study of the subject that



Washington Letter

if controls are removed there will be an immediate rise in the cost of steel of all kinds. They predict that this cost will hit the manufacturer strongly, and will be felt by the dealer, and thus will reach even the consumer. There is no doubt in the mind of those competent to give an opinion here in Washington that all segments of the sheet metal industry would promptly feel, in higher costs, the removal of controls from steel.

Analogous industries, such as manufacturers of farm implements, profess to be certain that there cannot be a decontrol of steel, copper and aluminum until, at the very earliest, 1954. Mr. Phelps, in his study, exempted primary metals from decontrol until the middle of the year, or thereabouts. Defense mobilizer Henry H. Fowler (who resigned as of January 1) strongly protested decontrol. Stabilization director Putnam, before his abrupt departure from Washington, vigorously objected to decontrol. And special investigator Mike DiSalle reported in detail against any decontrol.

Those who objected to the removal of controls over the volume of metals allocated and the prices, also pointed out that decontrol of wages would mean definite increases in all wages, union and non-union, and particularly in the wages of those who are employed in any part of the industry which makes, or fabricates, or manufactures, steel. One of the responsible officials of the best labor agency of the federal government told this reporter that even with control there will be the appearance of increases beginning in January, and that this appearance will be general. He said that many contracts between unions and employers come up for normal negotiation the first of the year, and that it is unwise to assume there will not be normal increases. He drew attention to the fact that there are a great many contracts pending, and that agreements on these contracts inevitably will affect those directly related and many even remotely affected. He emphasized that wages in the instance of contracts pending are bound to go up in January, and he suggested that these normal rises will carry along workers who are not unionized. It was the general opinion that absence of wage control would boost wages far beyond anything that may normally happen under wage control conditions. It should be understood that what has been reported applies to workers in the sheet metal industries as well as it does to other industries.

Defense Agencies Will Need More Steel

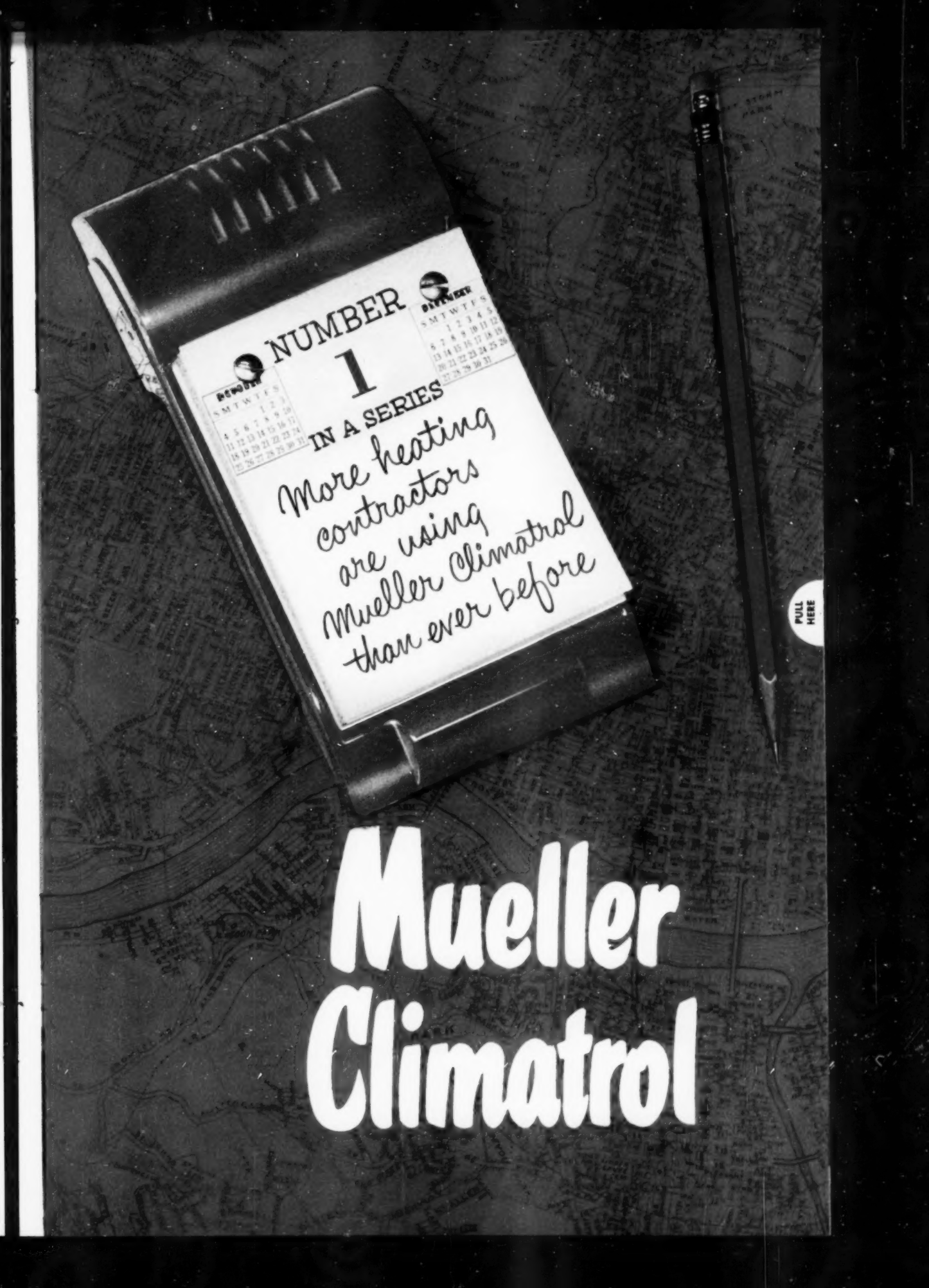
There seems to be a settled opinion among substantial people in Washington that defense agencies will require more steel, and more of other metals. To understand why military needs are expected to absorb more steel it is essential to get a quick, birdseye picture of the world condition as it is seen in Washington. Those best informed think that NATO, the western European nations, are lagging so far behind their promises and commitments that for purposes of defense their performance may largely be regarded as negligible. It is for this reason that the emphasis in foreign affairs is expected increasingly to swing to Asia, and to a lesser degree, to Africa. By the time this appears it is possible the new President may have revealed his program for Korea. It is generally assumed he will strengthen the Chinese Nationalists, give more arms and training to the South Koreans, and endorse a plan to launch an all-out drive within the year. It is expected we will take over most of the expense of the campaign the French are conducting in Indo China. It is not believed that the new President will supply the manpower to substitute for the French troops. The British will probably receive materiel, and other help, in Malaysia. Increasing military and civilian aid is going into Burma and Thailand. India is thought to be on the sharp edge between closer alliance with the Communists or with us. And we probably will be obliged to maintain stronger and better supplied forces in Japan. Asia rapidly is becoming the greatest armed camp in the history of the world.

In Africa, the Kenya troubles increasingly are becoming our problem. No one knows what may happen in the Union of South Africa. In their way the Africans, from one end of the continent to the other, are building up a turbulence that is comparable to the ferment in Asia.

Some Say We Need Tighter Controls

The best informed sources say the strategy of the Russians is to stir up these ferments rather than to become directly involved with us in a military war. We are told the Communists require most of their armed forces within Russia to keep down the growing unrest of the Russians themselves. It is said the actual Communists in Russia number three million, and that they all belong to the Russian Bureaucracy. It is with this mosaic of potential war in mind that responsible people in Washington insist we must have a greater production of war materiel, and that we must submit to more and tighter controls than those we have had. And it is considered probable that other basic materials besides metals may come under allocation, wage and price control.

(Please turn to Page 48)


NUMBER
1
IN A SERIES
More heating
contractors
are using
Mueller Climatrol
than ever before
PULL
HERE
Mueller
Climatrol



MASS PRODUCTION— Efficient manufacturing methods permit building quality equipment at lower cost. Illustration shows test procedure of motors and blowers during assembly of Mueller Climatrol Type 110's Gas-Fired Furnaces.



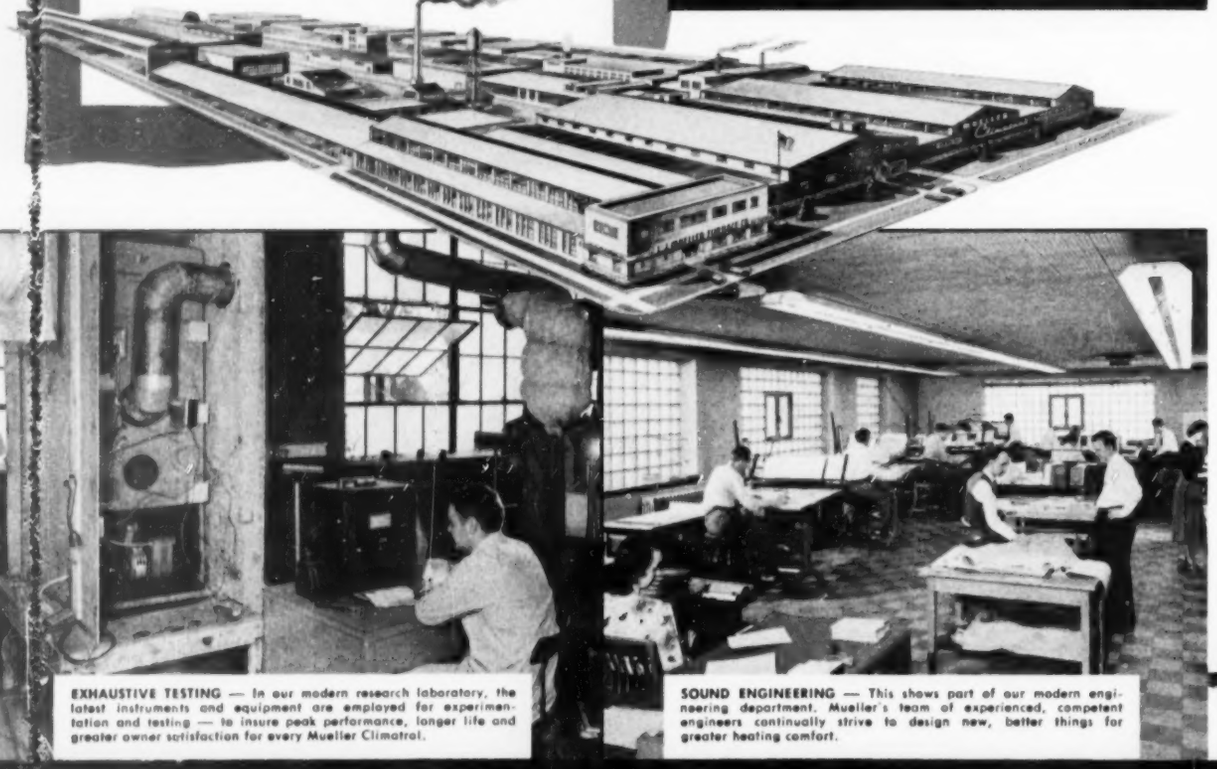
COMPLETE SHIPPING FACILITIES — Photo shows indoor loading warehouse. In addition, we have an eight-car outdoor loading space, and three truck loading docks with a capacity for twelve semis. These facilities speed shipping, permit giving better customer service.

Mueller Climatrol

"Modern factory and general offices of the L. J. Mueller Furnace Company. Located in Milwaukee since 1857, Mueller is one of the oldest and largest *exclusive* heating equipment manufacturers in the industry."



A SELF-CONTAINED PLANT — Complete facilities — to manufacture what we sell. Because we are self-contained, we are in a better position to give better service. Photo shows pouring iron from the cupola in our large foundry.



EXHAUSTIVE TESTING — In our modern research laboratory, the latest instruments and equipment are employed for experimentation and testing — to insure peak performance, longer life and greater owner satisfaction for every Mueller Climatrol.

SOUND ENGINEERING — This shows part of our modern engineering department. Mueller's team of experienced, competent engineers continually strive to design new, better things for greater heating comfort.



Mueller

the Big nam give

1. **A Fam** — universal of leadershi
2. **A Com** — a unit "si home, any ty
3. **Qualit** — highest s insure that e
4. **Advan** — careful p Mueller eng
5. **Sound** — the Muel assures fair
6. **Natio** — maintain strong supp
7. **Desig** — A compl competitive hesitate to b and wareho



r Climatrol

me in heating
ves you . . .

amous Name
ersally accepted, easy to sell. Backed by 95 years
ership.

omplete Line
it "sized right" and "priced right" for every need — any size
ny type of heat, any fuel.

ality Construction
est standards for materials, workmanship and inspection
hat every Mueller Climatrol is "right" before shipped.

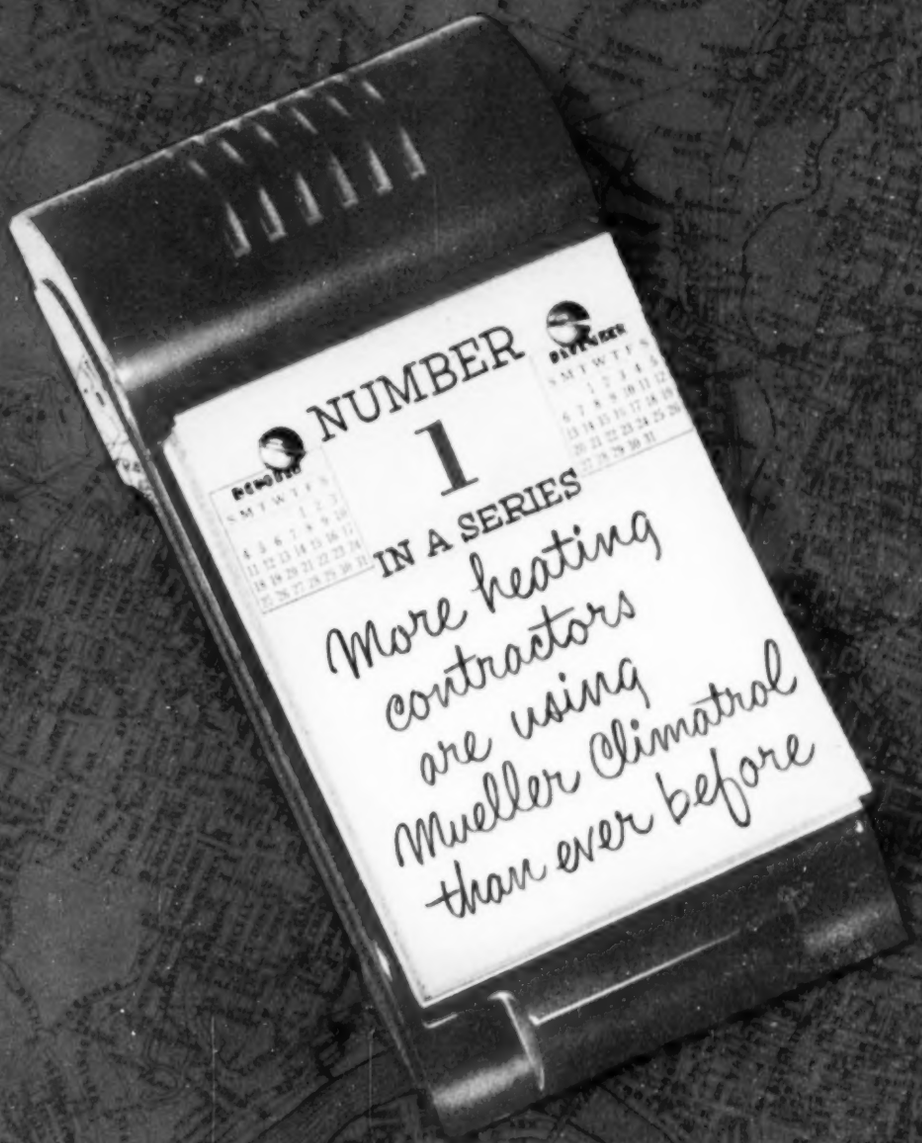
vanced Engineering
ful planning and exhaustive testing back the design skill of
r engineers to keep Mueller constantly "ahead of the field."

nd Sales Policy
Mueller sales policy offers broad sales opportunities,
fair sales practices.

tional Advertising
ntained month in and month out to give you constant
support.

signed Convertibility
omplete line of convertible units (for gas or oil) gives you a
titive edge when temporary fuel restrictions make customers
e to buy. "Simplifies your selling; reduces your inventory
rehousing."





Mueller Climatrol



Type 50 Oil Winter Air Conditioner — Steel. For residential and commercial use. Pressure burner. Four sizes: 100,000 to 225,000 Btu output at register.



Type 101-201 Gravity Furnaces (for oil or gas, convertible). 90,000 to 180,000 Btu input. A modular furnace; forced air and cooling can be added later.



Type 105-202 Winter Air Conditioner (for oil or gas, convertible). 100,000-450,000 Btu input. Up to 675,000 on gas. Modular; cooling can be added later.



Type 108 Winter Air Conditioner — cast iron, sectional; blower can be installed on either side. Five sizes: 67,500-157,000 Btu input. Cooling can be added.





Type 150 Direct-Fired Gas Unit Heater— suspended; horizontal. 60,000 to 150,000 Btu input. Blower types also available; see types 151, 155, 253.



Type 155 Gas Winter Air Conditioner. Horizontal design. In 60,000 and 90,000 Btu input. Also 120,000 and 150,000 as Type 151.



Type 253 Winter Air Conditioner. Horizontal, oil-fired. Four sizes, 110,000 to 250,000 Btu input. Convertible to gas.



Type 10 Gas Boiler — for domestic radiator or radiant heat, or hot water supply. Nine sizes from 54,000 to 378,000 Btu input, in increments of 27,000 Btu. Type 11 with exposed controls also available.



Type 20 Boiler — for commercial heating, hot water supply. Sectional construction. Forty-one sizes from 315,000 to 3,780,000 Btu input.



Type 35 Oil Boiler. Cast iron, sectional. 168,000 to 392,000 Btu output Convertible to gas.



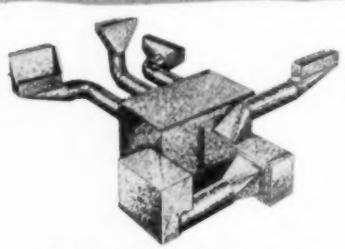
Type 702 — "FB" Coal Winter Air Conditioners — Steel or cast iron. Five sizes, 60 each, to 234,000 Btu output. Easily converted to gas or oil firing.



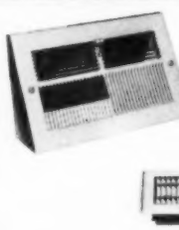
Type "F" — 701 Gravity coal furnaces — cast iron and steel — 20" to 30" fire-pots. Easily converted to gas or oil firing.



Type "WG" Gravity Furnace — coal, cast iron. One size — 42,000 Btu output at register. Type "WG" with blower filter also available, 72,000 Btu output.



Muelleraire small Pipe Heating — complete systems available, including gas or oil units, pipes, fittings, plenum chambers, registers and grilles for 4" system.



Registers and Grilles — for all requirements perimeter and Muelle

the Big Name in Heat

Mueller Climatro

with dc designed converti

— another instance of Mueller pioneering, and another Mueller dealers are always in front. A complete line of c units (for gas or oil) gives you a competitive edge whe ary fuel restrictions make customers hesitate to buy. wide range of sizes and type of Mueller convertible lowboys, horizontal and gravity models to choose from from sizes of cast iron boilers. With designed convert sell them an oil job now — switch to gas later at mode

Mueller Climatrol the biggest name in the industry for nearly an

Type 109-209 Winter Air Conditioner — steel with thermodynamically designed heat exchanger. Blower underneath. Two sizes: 100,000 and 135,000 Btu input.



Type 110 Gas Winter Air Conditioner — space-saving highboy design. In five sizes: 60,000 to 160,000 Btu input. White or green finish. Enclosed controls.

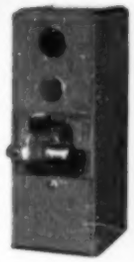


Type 111-211 Gravity Furnace (for oil or gas, convertible). 90,000 Btu input. Trim, compact, only 25½" wide. Shipped assembled on solid steel base.



Type 112-212 Winter Air Conditioner (for oil or gas, convertible). In 90,000 and 110,000 Btu input. Large blower. Shipped assembled on solid steel base.

Type 114-214 Winter Air Conditioner (for oil or gas, convertible). 90,000 to 150,000 Btu input. Shipped assembled. Large quiet blower.



Type 501 Gas Conversion Burner — designed for converting coal and oil-fired units. Four sizes: 125,000 to 275,000 Btu inputs. Long and short models.





Type 460 Oil Conversion Burner — pressure atomizing type. One to two G.P.H. 12" or 20" blast tube length.

Type 450 Oil Conversion Burner — pressure atomizing type. One to five G.P.H. 12" or 20" blast tube length.

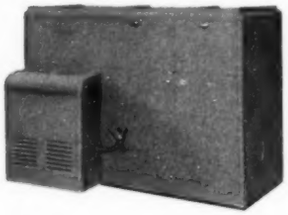




Type 116-216 Winter Air Conditioner (For Oil or Gas, Convertible). Four sizes, 90,000 to 150,000 Btu input.

Type 115-215 Counter-flow Winter Air Conditioner (for oil or gas, convertible). For perimeter heating, slab or crawl-space homes 80,000 (gas only) 110,000 and 150,000 Btu input.





Type 901 Summer Air Conditioner — for summer cooling with Types 105 and 108 (gas) and 202 (oil) winter air conditioners. Three, five and 7½ ton sizes.



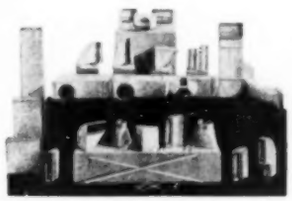
Type 903 Self-Contained Cooling Unit— for installation with any forced warm air heating unit. Available in two, three and five ton capacities. Compact, efficient.



Type 904 Self-Contained Cooling Unit— for stores or homes. Available with discharge grille, or can be used with ducts. Two, three, five and seven ton sizes.



Type 910 Self-Contained Room Cooler— compact. Requires no plumbing connections. Easily installed between two standard studdings. ¾ Ton size.



Furnace Pipe, Duct and Fittings — "Standardized," complete line. Includes patented take-off fittings.



Automatic Humidifier—to fit any warm air furnace. Porous inserts increase evaporation.



Levelizer — for Mueller gas-fired units only. Modulates flame to maintain even temperature.



Blower-Filter Unit— in wide range of sizes for heating, ventilating air conditioning.



Incinerator — gas-fired — 1.6 bushel size. Compact, attractive, smoke-proof and odor-proof. Continuous operation.

ating

r

ol

rtibility

ther proof that
e of convertible
when tempor-
uy. There is a
tible highboys,
from as well as
nvertibility you
modest cost.





illes — complete stock
nents on conventional,
Muelleraire systems.

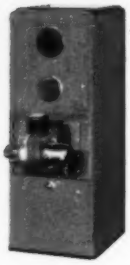
any type of residential or commercial heating and cooling!



Type 111-211 Gravity Furnace (for oil or gas, convertible). 90,000 Btu input. Trim, compact, only 25½" wide. Shipped assembled on solid steel base.



Type 112-212 Winter Air Conditioner (for oil or gas, convertible). In 90,000 and 110,000 Btu input. Large blower. Shipped assembled on solid steel base.



Type 114-214 Winter Air Conditioner (for oil or gas, convertible). 90,000 to 150,000 Btu input. Shipped assembled. Large quiet blower.



Type 460 Oil Conversion Burner — pressure atomizing type. One to two G.P.H. 12" or 20" blast tube length.

Type 450 Oil Conversion Burner — pressure atomizing type. One to five G.P.H. 12" or 20" blast tube length.





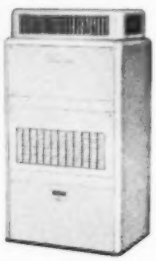
Type 116-216 Winter Air Conditioner (For Oil or Gas, Convertible). Four sizes, 90,000 to 150,000 Btu input.



Type 115-215 Counter-flow Winter Air Conditioner (for oil or gas, convertible). For perimeter heating, slab or crawl-space homes 80,000 (gas only) 110,000 and 150,000 Btu input.



Type 903 Self-Contained Cooling Unit— for installation with any forced warm air heating unit. Available in two, three and five ton capacities. Compact, efficient.



Type 904 Self-Contained Cooling Unit— for stores or homes. Available with discharge grille, or can be used with ducts. Two, three, five and seven ton sizes.



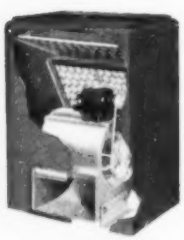
Type 910 Self-Contained Room Cooler— compact. Requires no plumbing connections. Easily installed between two standard studdings. ¾ Ton size.



Automatic Humidifier—to fit any warm air furnace. Porous inserts increase evaporation.



Levelizer — for Mueller gas-fired units only. Modulates flame to maintain even temperature.



Blower-Filter Unit— in wide range of sizes for heating, ventilating air conditioning.



Incinerator — gas-fired — 1.6 bushel size. Compact, attractive, smoke-proof and odor-proof. Continuous operation.

or commercial heating and cooling!



This Installation sold by Industrial Sales Co. of Washington, D. C.
Branches in Baltimore, Philadelphia, Chicago and Greensboro, N. C.

The above illusiration shows four of a battery of 11 Wysong power squaring shears in the production line at *The Glenn L. Martin Company,* world famous manufacturers of aircraft. The four shears illustrated are Wysong No. 748 with a capacity of 3/16 inch mild steel and a cutting length of 48 inches.

Like *The Glenn L. Martin Company,* many nationally known firms are using Wysong shears in producing articles for defense, for transporation, and for use in daily life. The rigid construction from Hi-tensile castings gives Wysong shears a long life of accurate shearing. Precision gauges make positioning of stock quick and easy.

Wysong builds 24 different models of power squaring shears with capacities up to 1/4 inch mild steel, in cutting lengths up to 12 feet. There is a size to fit your needs.

Wysong also builds Air Power and Foot Power Squaring Shears in capacities of 18 and 16 gauge mild steel, in cutting lengths from 36 inches to 10 feet; O.B.I. Presses; Slip Roll Forming Machines; and Rotary Combination Machines. See your dealer or write to the factory for full information.

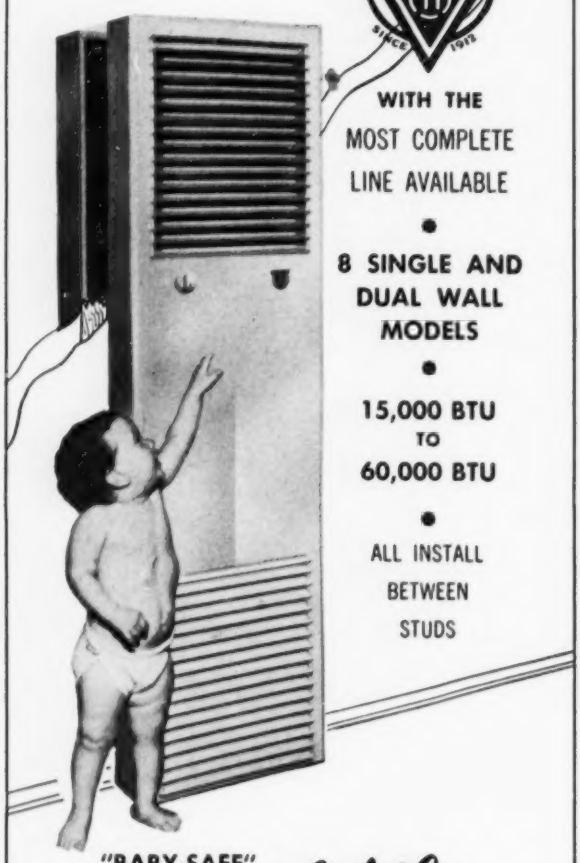
NATIONAL MACHINE TOOL BUILDERS ASSN. MEMBER

Wysong & Miles Company, Greensboro, N. C.

WYSONG

MORE SALES • MORE PROFIT

Hammel MA SINCE 1912



WITH THE
MOST COMPLETE
LINE AVAILABLE

•

8 SINGLE AND
DUAL WALL
MODELS

•

15,000 BTU
TO
60,000 BTU

•

ALL INSTALL
BETWEEN
STUDS

"BABY-SAFE"
Circulaire
VENTED
RECESSED
WALL HEATERS

. . backed by over 40 years of quality and leadership in the heating industry.

**OPENING NEW TERRITORIES
FOR JOBBERS & DEALERS**

WRITE OR CALL FOR DETAILS

QUALITY
SINCE 1912

Hammel
RADIATOR ENGINEERING CO.
Owned and Operated by A. J. Morrison and Associates
3248 Motor Ave. Los Angeles 34

(*Continued from Page 40*)

In the twelve-year period between June 30, 1940, and June 30, 1952, the United States has poured abroad in aid to nations, principally European, $87,318,000,000. Some nations who received this economic and military assistance have repaid $11,334,000,000. This makes the net foreign aid we have provided just a shade under $76 billion. The Department of Commerce is authority for this statement. Our aid was supplied in four ways: military aid, relief, recovery and economic aid, and technical assistance. From July, 1940, through June, 1945, the aid was almost wholly military in purpose to help the Allies arm themselves to crush the German forces. Thereafter relief and recovery was the major purpose through June, 1950; subsequently technical aid began to expand around the world.

Reciprocal Trade Program Probably to Continue

We know that the new President belongs to the "trade instead of aid" school. The American "internationalists" have in mind virtually to introduce free trade. The new President thinks foreign trade is vital to collective security for the non-Communist world because (1) it permits such nations to stand on their own feet rather than to live on an American dole; (2) it permits the flow of strategic materials to the United States; (3) it hinders Russian effort to divide the Western nations; and (4) the President has seen at first hand how trade barriers weaken the European economy.

It is expected Congress will continue the reciprocal trade program which comes up for renewal next June, but with clauses to protect American industry and agriculture. The President does not favor strict provisions to cut off foreign competition for American markets. The President is reported to feel that the protection of domestic economy and domestic workers does not wholly justify high tariffs.

Senator George W. Malone of Nevada is expected to lead the fight against lowering the tariffs. Senator Malone has proposed that we put a prohibitive tariff on things which we have, or make in abundance, and that the tariff structure be so put together that it will slope almost to the vanishing point on those things in which our supply is scarce. The Republicans — at least those who might be called Taft Republicans — will support Malone; so, also, will the Democrats who are led by Senator Byrd. But the other Democrats, traditionally free traders, are expected to team up with the free traders in the Republican ranks.

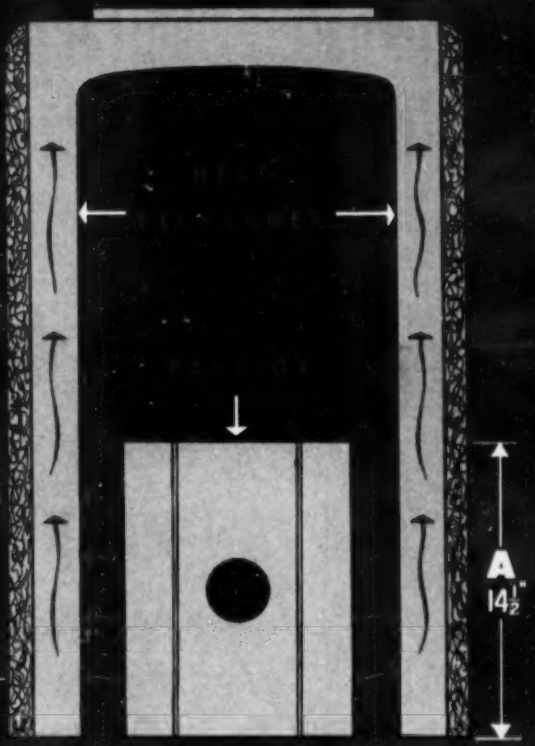
New Demountable Houses Developed

The Armed Forces Housing Agency, with the Prefabricated Home Manufacturers Institute, has developed two demountable-type houses which were exhibited at Indian Head, Maryland. One is a semi-detached two-family structure, the other a single-family detached unit. The semi-detached duplex house has two bedrooms in each segment, twenty-four feet square. Each unit also has kitchen, dining space, living room and bathroom,

So much more
Heating Area

So much faster
Heat Transfer

So much better
Heating Performance



that's what you get

with this

HEAT-RESISTING STAINLESS STEEL COMBUSTION CHAMBER

PANELOX®



Count the advantages—and you'll know why more and more of America's leading manufacturers of oil fired furnaces are switching to PANELOX *Heat-Resisting Stainless Steel* Combustion Chambers!

MORE HEATING AREA—As shown in the diagram (A) the Panelox greatly increases the actual heating area of the heat exchanger—nearly double in some cases. That means *more* heat transferred and utilized—*less* heat up the chimney.

FASTER HEAT TRANSFER—Because there are no bricks to act as insulation, heat from the Panelox chamber is absorbed directly into the walls of the heat exchanger (see arrows). That means faster heat transfer—keeps the Panelox from exceeding 1200° to 1300°F. Heat exchanger wall will not get over 700°F.

BETTER HEATING PERFORMANCE—Heats up in seconds, for proper combustion almost instantly. Eliminates override, for greater comfort, better room temperature control. Provides quicker, cleaner, quieter heat, saves fuel.

No other combustion chamber offers you—or your customers—so much. Write—*now*—for full details, sizes and prices.

Check these features

- Interlocking panels slide together without tools.
- Absolutely no backfill, cement or insulation.
- No breakage in shipment or handling.
- Far less shipping weight than other types.
- Four thicknesses of metal at seams—provides extra strength and rigidity.
- Panels made in several sizes for easy fitting to a wide range of chamber dimensions.
- For round, square, rectangular or pear-shaped installations.

Stefco STEEL COMPANY •

We have steel for immediate shipment of PANELOX Combustion Chambers

Heating Equipment Div. • Michigan City, Ind.

How Heating Contractors Profit 7 Important Ways



WITH **VAN-PACKER**
PACKAGED MASONRY CHIMNEY
Sales Features

1. **MORE PROFIT**—Install it all from furnace to flue and add to your profits. Why give the chimney sale to someone else when you can do it yourself?
2. **FREEDOM IN PLANNING**—The heating plant can be centrally located so heat runs are shorter and fuel savings are greater.
3. **EASILY INSTALLED**—The Van-Packer All-Fuel Masonry Chimney is easily installed in 3 hours or less . . . in 97 minutes with a helper.
4. **PERFORMANCE**—Maximum heater output for Van-Packer 7" I.D. Flue, 20' Floor Suspended Model, is 250,000 BTU per hour for coal, 300,000 for oil, 500,000 for gas. The 10' Ceiling Suspended Model is 150,000 BTU per hour for coal, 200,000 for oil, 450,000 for gas.
5. **SERVES ALL FUELS**—Van-Packer serves heating plants burning any type fuel in homes of ten rooms or less.
6. **FIRE SAFETY**—Has insulating vermiculite concrete wall and fire-clay tile liner, equal in insulating value to 24" of brick or 70" of ordinary concrete.
7. **IMMEDIATE DELIVERY**—The Van-Packer is nationally distributed through reliable heating and building material jobbers. Jobber openings are still available. Write for literature and details.



Van-Packer is tested and approved fire-safe for use with all fuels by Underwriters' Laboratories. F.H.A. accepted.

Van-Packer CORPORATION
Dept. 3 209 S. LaSalle St.
Chicago 4, Illinois

Also Manufactured and Distributed in Canada by C. A. McRobert and Son, Ltd., St. Laurent, Quebec.

and a 4' x 4' storage space in the rear of the building opening on the rear porch. The gross floor area for each unit is 592 sq ft. The twin house is made of wood-framed panels covered with plywood inside and out.

Each of the two units is complete with equipment, including an oil-fired space heater, electric cooking range, electric refrigerator, electric water heater and combination sink and laundry tubs. The negotiated contract price is $10,750, which includes placing the twin house on the site, grading, sodding and landscaping. The second house has two bedrooms (and an alcove usable as a third bedroom), combined dining and living room, kitchen and bath. The gross floor area is 643 sq ft. Installed on the site, with grading, sodding, landscaping, it costs $6500.

Report on Stabilizing Construction

Miles Colean and Robinson Newcomb, in a report, *Stabilizing Construction: The Record and Potential*, delivered by the Committee for Economic Development to Secretary of Commerce Sawyer, state:

1. They find it is not true that the construction industry is subject to eighteen to twenty-year cycles of depression-precipitating declines. They say there is no such cycle.

2. They find serious post-war declines, such as those which followed the Civil War and World War I, are not inevitable. Their study indicates that with public and private development of proper economic policies, construction volume can remain at high levels through the foreseeable future, without the threat of a collapse like that of 1932.

3. They offer details for the timing and managing of a public works program as a quick and effective means of offsetting drastic declines in the construction industry and the economy as a whole.

4. They declare it is not true that violent swings in construction activity trigger off broader economic fluctuations. They say that the construction industry is more victim than villain, that it fluctuates less than some other major segments of the economy, and that falling demand for some forms of construction is frequently offset by rising demand for others.

5. They assert restrictive practices by employers, workers and Government have not given the intended beneficiaries real protection against wide shifts in demand, supply, prices, wages and employment. They hold such practices have actually prevented the industry's growth to its proper potential and contributed to its instability.

Leonard Macomber of the Building Materials Branch in OPS, well known to the people in the various segments of the sheet metal industry, expected to spend the last two weeks of the year on a short vacation in Florida. However, just about the time he expected to start, he had a slight stroke. He is recovering, but it is doubtful whether he will return to OPS. His duties have been taken over by Richard C. Cook.



Elephants don't need humidifiers—they have a built-in arrangement they like much better.

Humans, on the other hand—especially those who own homes, need humidifiers to put necessary moisture in their homes during the heating season.

They can appreciate the value of the Skuttle Humidifier, and can be sold much more easily than elephants. Also, in your territory there are plenty of homeowners—few elephants.

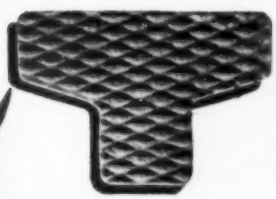
So, cross all the elephants off your prospect list and start after the home owners today.



SKUTTLE
SERIES 600
HUMIDIFIER

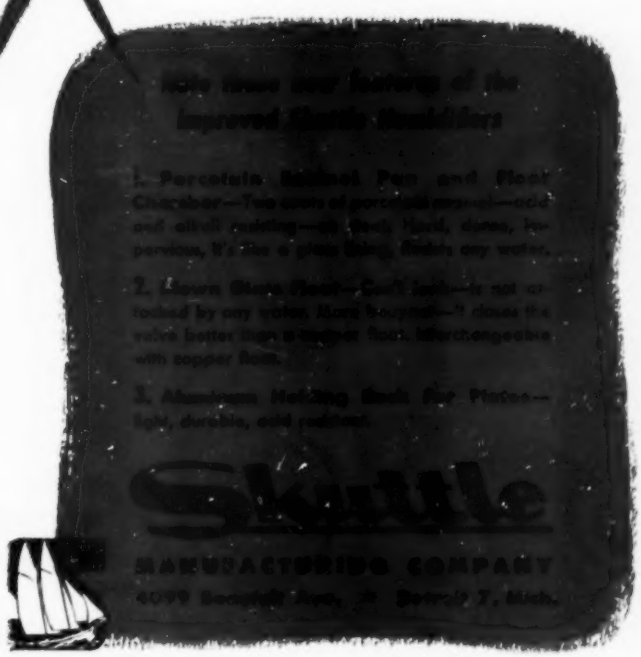
Double coated porcelain enamel steel pan and float chamber—blown glass float—resists almost any water. Self-flushing, self-cleaning—holds up to 20 Patented Vapoglas Plates. The ideal humidifier for the average home.

Write for Bulletin on the complete Skuttle Line—Includes Series 300 which holds up to 40 plates—Series 500 for coal fired furnaces.



**PATENTED
VAPOGLAS
PLATE**

Pure glass wool compressed under heat. The most efficient evaporating plate you can get. All evaporating plates should be replaced when clogged with water chemicals—about once a year.

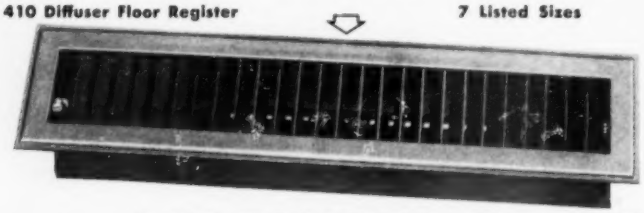


YOUR FIRST CHOICE — 1953

U.S. Air-Conditioning Registers & Grilles for Conventional Forced-Air, Perimeter, Small Pipe, Air-Conditioning & Gravity HEATING SYSTEMS

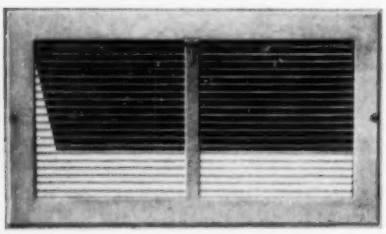
PERIMETER & SMALL PIPE SYSTEMS

No. 410 Diffuser Floor Register — 7 Listed Sizes

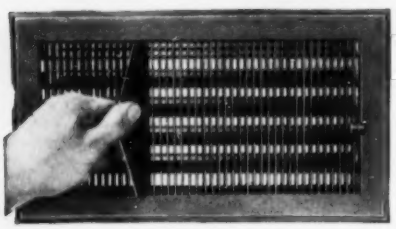


CONVENTIONAL FORCED AIR

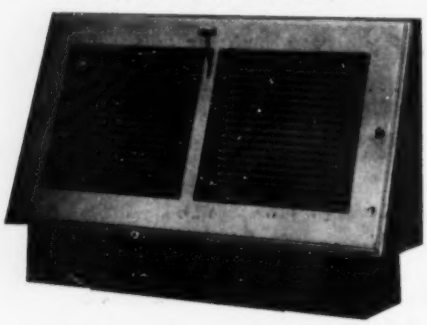
No. 153 U. S. A. C. Registers (Single Valve)



No. 256 U. S. Air-Conditioning Registers



No. 163¾ U. S. Out-of-Wall Registers

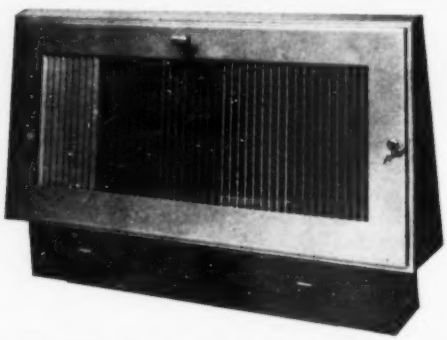


No. 500 Round Ceiling Outlets

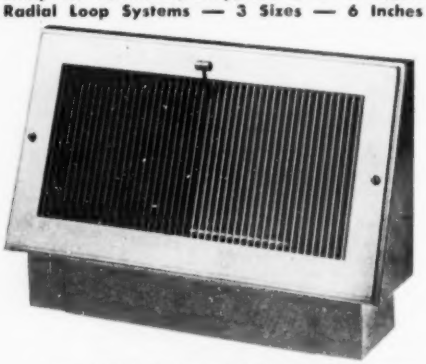


"The World's Best and Most Complete Lines"

No. 132¼ (U. S. Out-of-Wall) Base Diffuser — Specially for Small Pipe Systems — 3 Sizes — 5 Inches High



No. 133¾ (U. S. Out-of-Wall) Base Diffuser — Specially for Perimeter, Loop, and 6"-7"-8" Radial and Radial Loop Systems — 3 Sizes — 6 Inches High



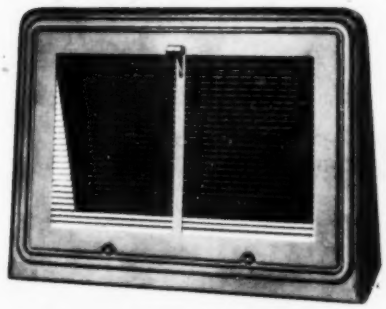
No. 800 U. S. Round Ceiling Outlet Damper



No. Keys No. Chain

Adjust with Ordinary Screw Driver

YOUR BEST SELECTION FOR 1953 — SHOULD BE U.S. GRAVITY BASE FLOOR REGISTERS and FACES for GRAVITY HEATING SYSTEMS

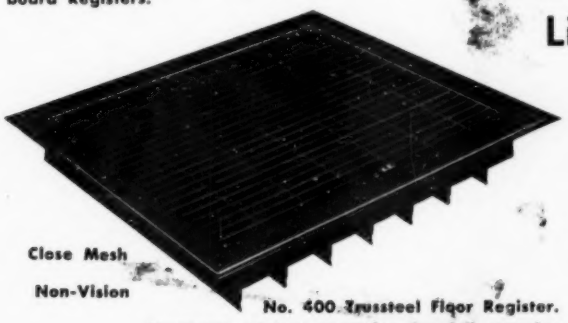


No. 40 Series U. S. Gravity Baseboard — Two piece, removable center with attaching turn-buttons. The finest in Gravity Baseboard Registers.

Standard Gravity Lines



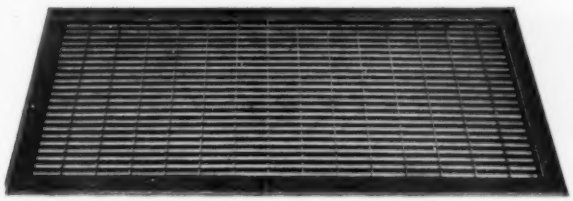
No. 700 Series — U. S. Special (Out-of-Wall) Gravity Baseboard Register. For Old-House Work.



Close Mesh

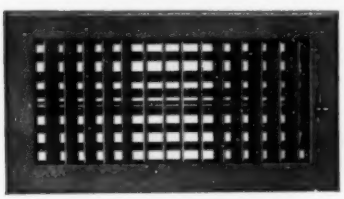
Non-Vision

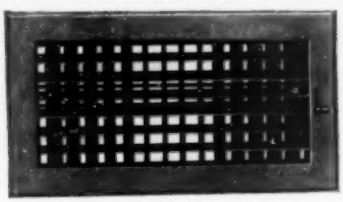
No. 400 Trussteel Floor Register. Strongest, easiest operation for full capacity.

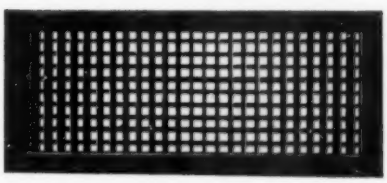


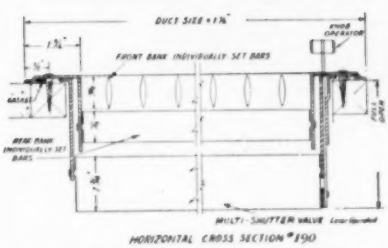
No. 405 Trussteel Floor Face. Close mesh — non-vision. Strongest construction. Made in all standard sizes and finishes. Will not sag or rattle. Get the best floor face.

NO. 190 SERIES—U.S. MULTI-FLEX REGISTERS AND GRILLES. THAT WONDERLINE OF STREAMLINED GRILLES FOR HIGH VELOCITY HEATING AND COOLING SYSTEMS



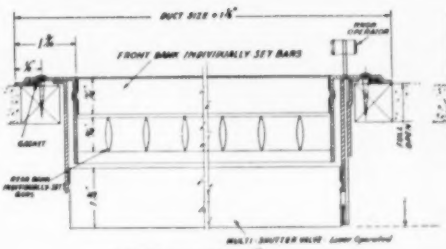






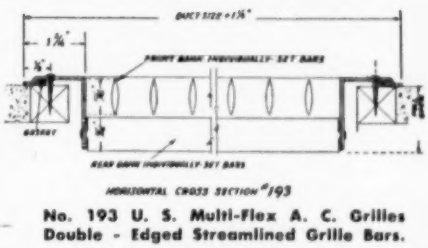
HORIZONTAL CROSS SECTION #190

No. 190 U. S. Multi-Flex A. C. Register Double - Edged Streamlined Grille Bars.



HORIZONTAL CROSS SECTION #191

No. 191 U. S. Multi-Flex A. C. Register Double - Edged Streamlined Grille Bars.



HORIZONTAL CROSS SECTION #193

No. 193 U. S. Multi-Flex A. C. Grilles Double - Edged Streamlined Grille Bars.

No. 194 U. S. Multi-Flex A. C. Grilles are same as No. 193 excepting the positions of the Banks of Grille Bars are reversed.

Make "U.S." Your Source For The Best and Latest in Registers and Grilles

WRITE FOR No. 53 CATALOG

UNITED STATES REGISTER COMPANY

BATTLE CREEK, MICHIGAN

MINNEAPOLIS • KANSAS CITY • ALBANY

SOLD BY LEADING JOBBERS FROM COAST TO COAST

For Bigger



Gas FLO-WARM

Gas Fired Models are available from 85,000 B.T.U. to 220,000 B.T.U. Input.

Oil FLO-WARM

Oil Fired Models range from 90,000 B.T.U. to 250,000 B.T.U. Input.

Duo-Fuel FLO-WARM

Duo-Fuel Furnaces (Gas or Oil) are available in Gravity and Forced Air Models. B.T.U. input range is from 90,000 to 190,000.

Coal FLO-WARM

While primarily designed as coal burning units, Williamson Coal Fired Furnaces are "All-Fuel" Furnaces easily adapted to gas and oil. B.T.U. at Register from 58,380 to 275,000.

Pipe and Fitting Systems

Spend your time where you make the greatest profit . . . on sales and service. Figure the cost of making your own fittings and you'll see why you profit by using Williamson fittings. Scientifically designed to save time on the job, they fit right, stay tight. Die-cut so that each fitting is interchangeable with others. No shop crews—no capital investment in shop equipment—less installation time. A complete line of Pipe and Fittings for Perimeter, Extended Plenum, Reduction and Small Pipe systems.

Profits



► Over 100 Gas, Oil, Coal and L.P. Gas Furnace Models.

► A Duo-Fuel Line (gas or oil) for Temporarily Fuel Restricted Areas.

► All Sizes of Pipe and Fittings for Conventional and Small Pipe Systems.

► Packaged Fittings for Easier Warehousing, Handling, and Inventory Taking.

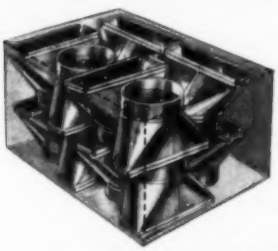
► Quality Construction—the Finest in Materials and Workmanship.

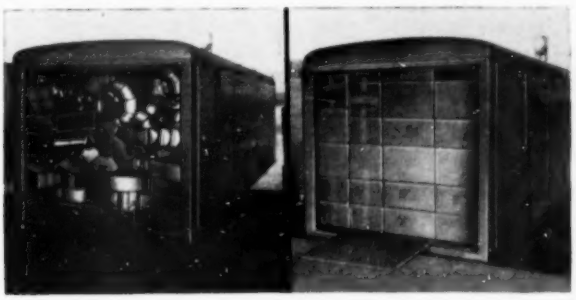
► A Sound Sales Policy, Tried, Tested and Accepted for Over Sixty Years.

► A Complete Line of Tested Dealer Sales and Engineering Aids.

► A Consistent National Advertising Program to Support Your Sales Effort.

WILLIAMSON
WARM AIR HEATING SYSTEMS





Williamson Packaged Fittings

- Reduce unloading and warehousing time.
- Speed shipments.
- Reduce damage and distortion.
- Protect fittings from weather.
- Save warehouse space.
- Make inventory taking faster, easier.

THE WILLIAMSON HEATER CO. • 3500 Madison Road, Cincinnati 9, Ohio



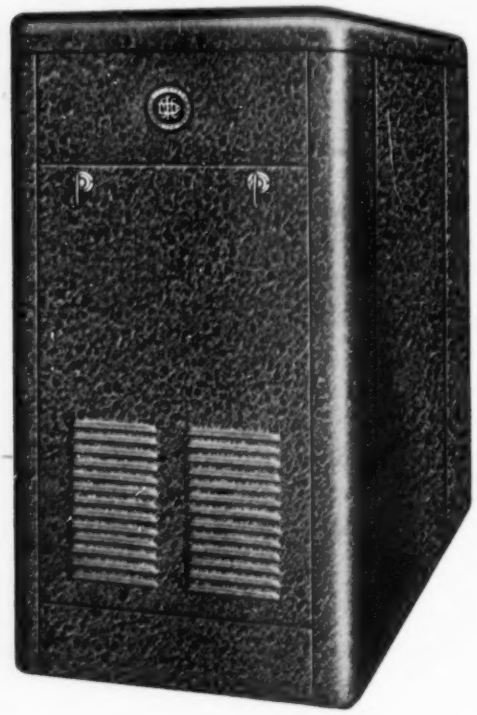
it's the
combination
that counts!

The Dowagiac Quality Line and Direct Sales Plan
ADD UP TO PROFIT!

You need both a good line AND a modern, high-profit sales plan, to make money in 1953. Dowagiac — and only Dowagiac — gives you a prestige, *quality* line *and* a direct-from-the-factory sales plan that enables you to meet or beat competition and still make a handsome profit.

You *buy* the Dowagiac line better, so you can *sell* it better. Simple as that! You buy direct (but without tieing-up money in inventory). YOU decide whether to pass along the important savings (as lower prices) or build up your own surplus account. Either way, you have important *sales* advantages. Hundreds of prosperous dealers use this successful, 25 year old plan. Get ALL the details, now. Fill out and mail coupon today!

Complete line of Furnaces and Winter Air Conditioners for all fuels. Smart, exclusive design. Engineered for easy installation and fine performance. Water heaters, too. Every unit a big value in customer satisfaction!



DOWAGIAC
Steel Furnace Company

DOWAGIAC STEEL FURNACE COMPANY, DOWAGIAC, MICHIGAN

Gentlemen: Without obligation, please send the full details about *bigger* profits at *lower* prices with the Dowagiac Plan.

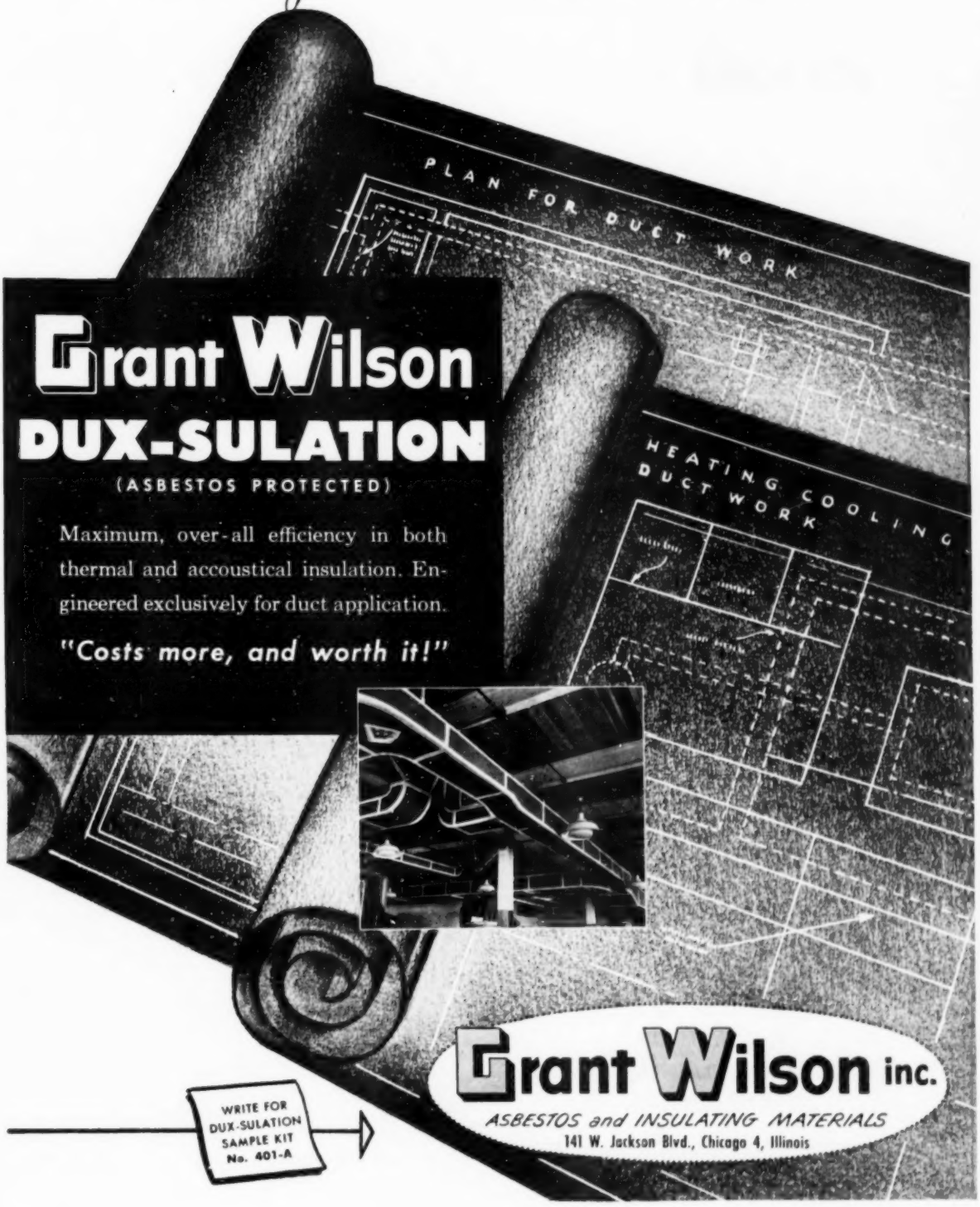
(Firm name)_____

(Individual)_____

(Address)_____

(City)_____ (Zone)_____ (State)_____

For projects where nothing but the BEST is desired.....
where nothing less than the BEST is acceptable....



Grant Wilson
DUX-SULATION
(ASBESTOS PROTECTED)

Maximum, over-all efficiency in both thermal and accoustical insulation. Engineered exclusively for duct application.

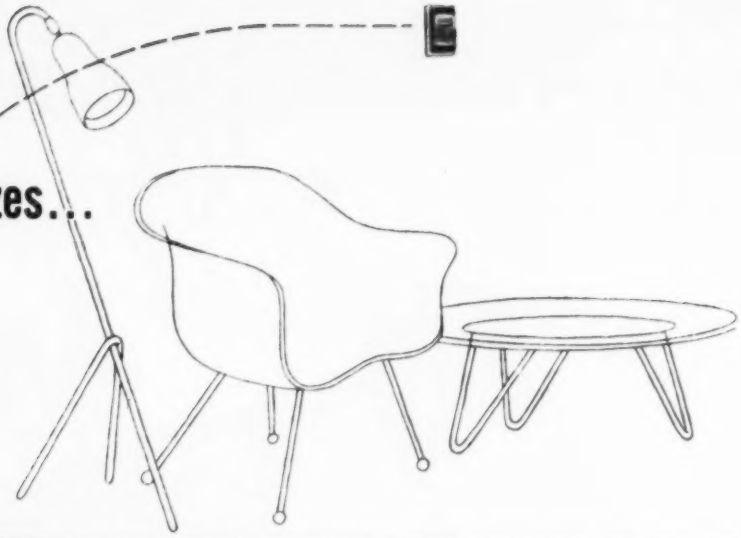
"Costs more, and worth it!"

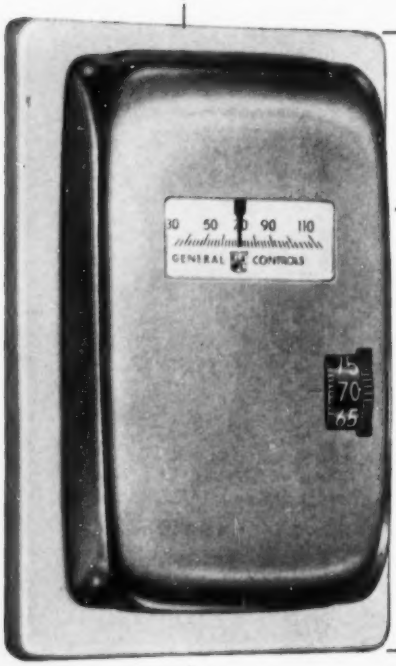
WRITE FOR DUX-SULATION SAMPLE KIT No. 401-A

Grant Wilson inc.
ASBESTOS and INSULATING MATERIALS
141 W. Jackson Blvd., Chicago 4, Illinois

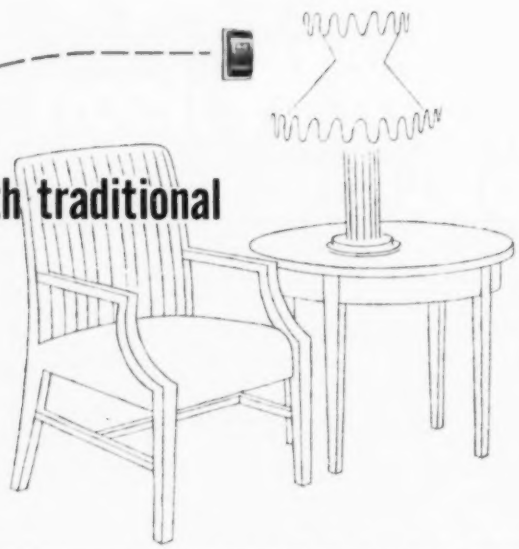
Beauty that harmonizes...

with modern





with traditional



with provincial



General Controls Metrotherm "belongs" in any room, with its flush-design, all metal case in rich, ever-lasting satin-chrome finish, harmonizing with any interior decorative theme. Because of this durable all-metal case, there is no fragile painted surface to chip, crack, show finger marks or smudge. Because it is sensitive to both radiant and convected heat, it holds accurate temperature level at all times.

New for '53

- *easy-to-read temperature dial has permanent white numerals imbedded in plastic*
- *new clear-vision thermometer*

Best for you...

and your customer, too



With the addition of the new *700 millivolt pilot generator,* this completely self-powered control system now fits the greatest range of heat control applications. Since the origination of the B-60 self-generating package sets by General Controls 14 years ago, hundreds of thousands of these controls have given trouble-free performance. No outside current required. No power-failure service calls. Quiet operation, accurate temperature control, positive safety. A variety of standard and timer thermostats available.

General Controls

GLENDALE 1, CALIFORNIA • SKOKIE, ILLINOIS

Manufacturers of Automatic Pressure, Temperature, Level and Flow Controls for Heating, Home Appliances, Refrigeration, Industrial and Aircraft Applications.

FACTORY BRANCHES IN 32 PRINCIPAL CITIES –
SEE YOUR CLASSIFIED TELEPHONE DIRECTORY



A variety of General Controls Thermostats helps you satisfy every customer—T-70 with permanent magnet and snap-action contacts—T-99 with mercury switch. T-70X and T-70T have built-in interval Swiss timers permitting shut-off of daytime temperatures for any selected period up to 13½ hours and night setting for minimum temperatures. T-70 and T-99 Thermostats also available for 24-volt circuits.

The B-60 Gas Valve is operated electrically by the current supplied from the pilot generator. It opens and closes gas fuel line at the demand of a room thermostat or limit control. Valve closes if pilot is extinguished, providing positive safety control. The B-60 Valves are standard for all gases. Available in all standard pipe sizes from ⅜" to 1½".

General Controls PG-9 Pilot Generators perform three jobs—(1) main burner ignition, (2) pilot safety, and (3) millivolt generation to operate the control system. Maximum millivolt generation (700 mv) obtained with low pilot gas consumption.

LAU

offers you the ALL NEW, refined and improved

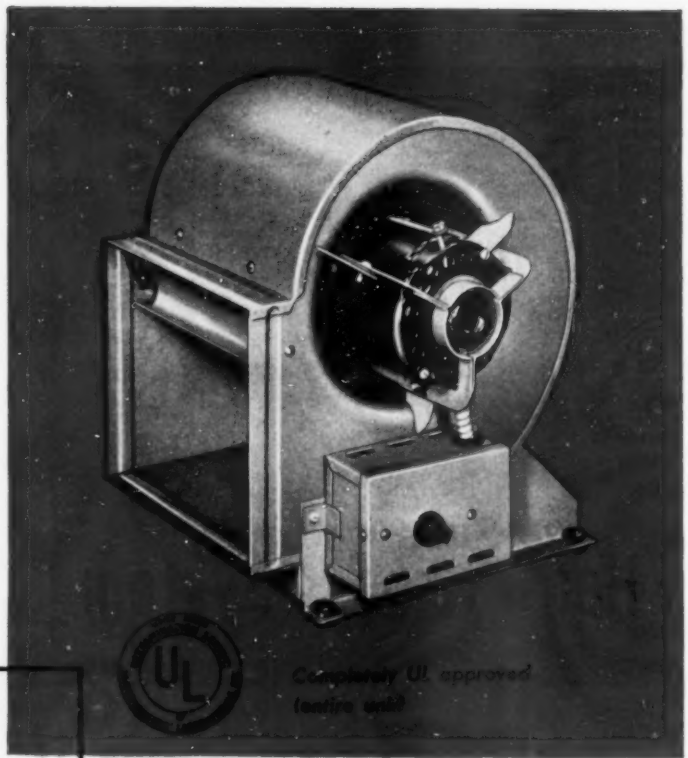
A7DD Direct Drive Double Inlet Blower

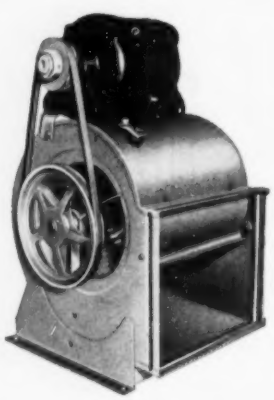
Small, compact, efficient and quiet

A 7½" Double Inlet Blower with motor built INTO the Unit!

The ALL NEW LAU A7-DD pictured here is the perfect unit for in-a-wall gas and oil furnaces. It is the one answer to manufacturers who build hi-boy, low-capacity units. It is the ONLY unit completely UL approved, covering the entire unit (also approvable in combination with furnace).

The A7-DD has fingertip adjustment for wide range 7-speed control. For furnaces to be rated at capacities from 44,000 to 76,000 b.t.u. per hour (bonnet) at 100° temperature rise—or capacities from 31,000 to 54,000 b.t.u. per hour (bonnet) at 70° temperature rise.





MEMBER NATIONAL WARM AIR HEATING AND AIR CONDITIONING ASSOCIATION INDOOR COMFORT

Write dept. A for full information

Lau Series "A" blower assemblies

The all-time outstanding achievement in the blower field. Overall size is considerably smaller than formerly and many features are revolutionary —exclusive with Lau—and protected. Entire unit is die-formed, lending itself to mass production on precision-built equipment with reflected low costs. Has 1-pc. motor mounting, self-aligning bearing, new LAUsteel pulley wheel. Write for Catalog 602 giving complete dimensions and performance data.

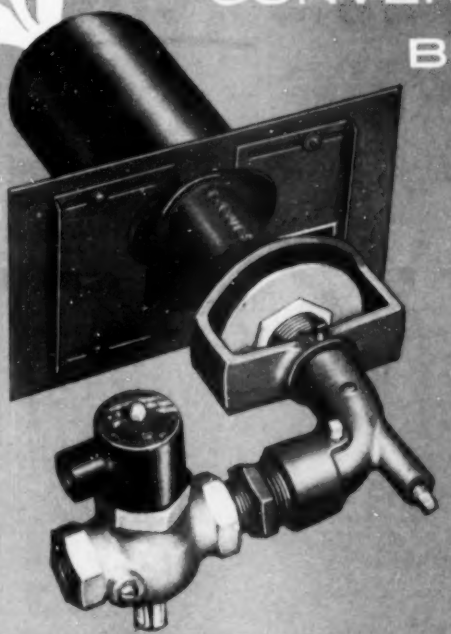
THE LAU BLOWER COMPANY • DAYTON 7, OHIO

ADAMS

INSHOT GAS CONVERSION BURNER

ONLY 4¼" DIAMETER!

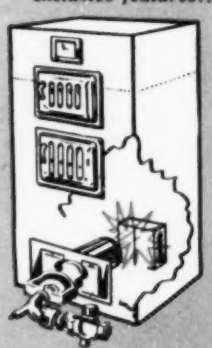
ONLY 7" LONG!



The ONLY conversion burner designed especially to convert Gun-Type Oil-Fired Units to Automatic Gas Heat!

- Completely Automatic
- Simpler to Install and Service
- Wider Application

with all these exclusive features...





Automatic Gas Safety Pilot



Gas Pressure Regulator



Automatic Electric Gas Valve



Automatic Room Thermostat



Runner Flame Pilot Lighter

AGA Tested and Certified



Available for use with natural, mixed, manufactured or L P gas.

Write • Wire • Phone for Information!

Here is the only unit designed especially to convert oil-fired units to automatic gas heat. As illustrated above, the burner tube is only 7" long and 4¼" diameter. This enables the burner to be installed in furnaces or boilers where the average burner will not fit.

A universal mounting flange is available for applications where the burner tube does not project its entire length into the heating unit. This flange is so designed that it can replace almost any oil burner mounting flange.

Maximum capacity of the Adams Inshot Gas Conversion Burner is 180,000 B.T.U. per hour, sufficient to heat the average 10-room dwelling.

36-MONTH FACTORY WARRANTY
against defective materials or workmanship in the burner assembly.

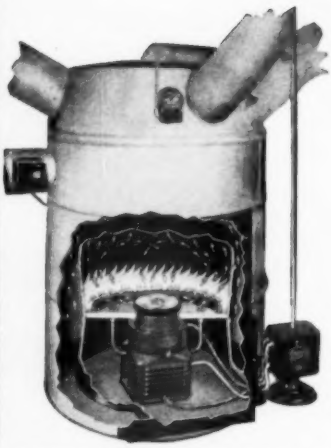
ADAMS MANUFACTURING CO.

1530 ST. CLAIR AVE.
CLEVELAND 14, OHIO

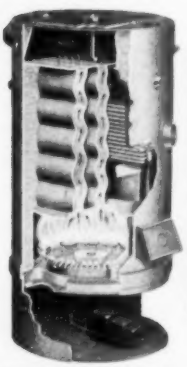
Easy to Sell!
Easy to Install!
Easy to Service!

TORIDHEET





Toridheet Model F in warm air furnace



Toridheet Model ORU rotary fired boiler



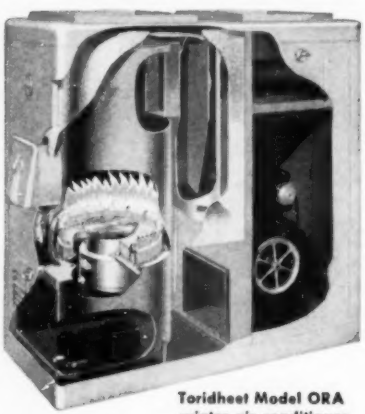
Toridheet Model ORA-75 Hi-Boy winter air conditioner

The Pioneer rotary wall flame oil burner

The customer-proved economy of TORIDHEET rotary wall flame equipment makes it your best bet for sales and satisfaction. TORIDHEET equipment sells easily and *stays sold.*

- **Economical— saves up to 50% on oil**
- **Burns catalytic oil efficiently**
- **Quiet and clean**
- **Correct flame placement**
- **Fully automatic**
- **Trouble-free— one moving part**
- **Backed by 27 years of research and development**

... For conversion jobs and in complete heating plants



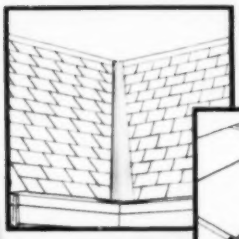
Toridheet Model ORA winter air conditioner

Other Toridheet units for every need ... every budget ... Gun Burners ... Gun Fired Boilers and Furnaces ... Gas Conversion Burners and Gas Fired Furnaces

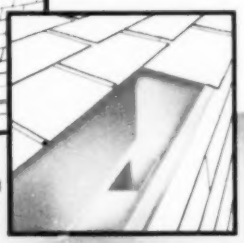
CLEVELAND Toridheet AUTOMATIC HEATING

TORIDHEET DIVISION
CLEVELAND STEEL PRODUCTS CORPORATION
7318 Madison Avenue Cleveland 2, Ohio

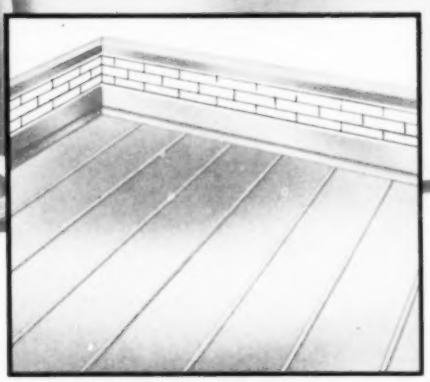
Affiliated Canadian Manufacturers: Conroy Mfg. Company, Ltd., Catherine St., St. Catherines, Ont.



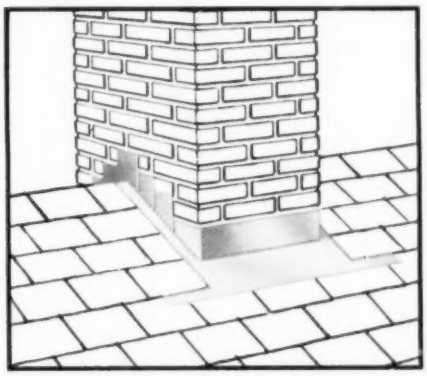
Terne Metal valley applied to asphalt shingle roof.



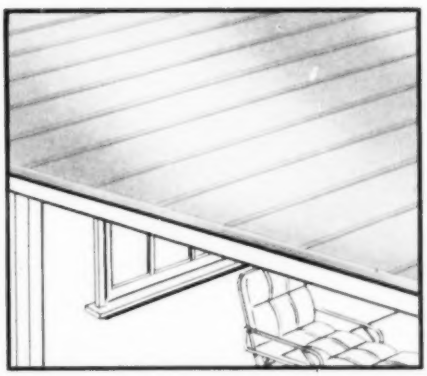
Built-in Terne Metal gutter on home with shingle roof.



Flat roof deck—vertical seams are flat locked.



Terne step flashing applied to chimney on slate roof.



Porch roof—vertical and horizontal seams are flat locked.

FOLLANSBEE STEEL CORPORATION

PITTSBURGH 30, PA.

FOLLANSBEE TERNE METAL ROOFING

In 50-Foot Seamless Rolls

Terne, or more accurately terne plate, is the correct name for the material often called "roofer's tin." The old name persists, even though a plating of tin alone has not been used for roofing for more than a century.

Modern terne plate consists of copper-bearing steel strip, cold reduced to the proper thickness, heat treated to provide the best balance between malleability and toughness, and hot-dipped to give it a heavy coating of Terne Metal—an alloy of lead and tin. The lead provides protection against the weather, and the tin bonds the alloys to the steel base with greater adherence than is possible with lead alone.

Follansbee Steel Corporation has been making the highest quality Terne Metal for more than half a century. First, as "box ternes"—hand-dipped rectangular sheets 14″ x 20″ and 20″ x 28″—which were seamed and soldered together when they were laid. Later, we offered "long roofing ternes"—sheets 8 feet long—then originated the exclusive Follansbee 50-foot seamless roll.

Its durability, malleability and toughness make terne the ideal weather-sealing material. It is used for valleys, gutters, flashings, etc., on built-up, composition, asphalt or asbestos shingle, slate and tile roofs. A wide range of widths—4″, 6″, 7″, 8″, 10″, 12″, 14″, 20″, 24″ and 28″—is provided for any weathersealing need.

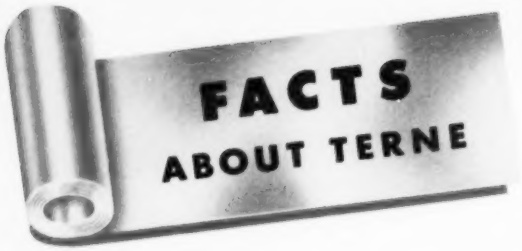
Weatherseal strips of Terne Metal may be painted immediately after installation. Terne is supplied unpainted, or painted one side, or painted two sides at the mill, as ordered. If received unpainted, the underside must be painted before the weatherseal is installed. If received painted one side, the weatherseal is installed painted side down, and the exposed side should be painted as soon as possible after installation. If installed painted two sides, the mill paint coat is adequate primer on the terne, and it is necessary to apply only the finish coat, or coats, as desired.

Weathersealing may be painted to match or harmonize with any roof, from slate to bright asphalt shingles, or tiles of any color. A list of 37 major paint manufacturers and their recommendations is included in the bulletin "How to Paint Follansbee Terne Metal Roofs." A good paint job is obtained when the suggestions included in this booklet are closely followed.

Follansbee Terne Metal is flexible in application—it may be used for any weathersealing application. It comes in a wide variety of widths; it has a low expansion and contraction rate; it has rugged strength—tensile strength is 45,000 lbs. per square inch; it resists tearing—the base metal is steel; it is fire-resistant—all metal, with nothing to burn; and it has a low maintenance cost—only an occasional painting. All these features add up to a completely satisfactory weathersealing material.

Box ternes are still available, but with comparatively fewer applications, especially since roofers and builders have come to realize that the idea that cross seams allow for expansion and contraction is erroneous—the metal can only expand and contract by breaking open the solder in the seams. With continuous rolls of Terne Metal, this factor is so negligible that it need not even be considered.

Pre-cut flashing shingles, 5″ x 7″, IC gage, painted two sides, can be supplied in packages of 100.



BASE METAL FOR TERNE: Two thicknesses of base metal are available—standard IC gage (approximately 0.0122″ thick), and IX gage (approximately 0.0155″ thick). IC gage is most widely used on all domestic and most industrial and commercial weathersealing applications. IX gage is made only on special order for extremely wide gutters and some industrial service, where extra heavy base metal is required.

COATING GRADES: Coating grades are expressed in terms of total weight of coating on a given area. This area, by old trade custom, is the total covered by a box—112 sheets—of 20″ x 28″ terne plates, and amounts to 436 square feet.

Follansbee Terne Metal Seamless Roll Roofing is available in three coating grades—40 lb., 20 lb., and 8 lb. The 40 lb. grade is most strongly recommended because the extra heavy coating provides an additional safety margin for satisfactory, trouble-free service, with only an occasional painting, for the life of the building. The 20 lb. grade, however, is adequate for good service, when repainted each time the rest of the structure is refinished, although it lacks the extra safety margin of the 40 lb. grade. Some 8 lb. coated Terne Metal roofing is available, but it is not recommended except for special or temporary applications.

EXPANSION AND CONTRACTION: When weathersealing with Terne Metal, there is no need for expansion allowances or joints, for terne expands and contracts only 0.2195″ per 30 lineal feet for a 100° F temperature change. Terne Metal is tough enough to absorb these slight changes, therefore the expansion and contraction features may be completely ignored.

TABLE: Expansion per 30 feet of Metals per 100° F. Temperature Rise

Terne Metal	0.2195 inch
Copper	0.3192 inch
Aluminum	0.4608 inch
Lead	0.5724 inch
Zinc	0.6228 inch

TABLE: Tensile Strength of Metal Weathersealing Materials

Terne Metal	45,000 lbs. per sq. inch
Zinc—Across Grain	36,000 lbs. per sq. inch
Copper	32,000 lbs. per sq. inch
Zinc—With Grain	27,000 lbs. per sq. inch
Lead	1,780 lbs. per sq. inch

Follansbee Terne Metal Seamless Roll Roofing and box ternes are carried in stock nationally by all leading distributors.





COMPLETE ROOFS OF TERNE

The properties of Follansbee Seamless Terne Metal roofing that make it desirable for Weathersealing also make it the best material for complete roofs. The architect and the man of the house like the good design features and the fine service it renders; the woman of the house likes its beauty of design and the color range it makes possible by the use of paint; and the builder, in addition to liking all these qualities, knows that he can build a house with a Terne Metal roof incorporating lighter structural design, because he is free of concern for the weight of the roof.

* * *

A terne roof is easy to install, for there are no cross seams in Follansbee Seamless roofing to plague the roofer. It is easy to maintain, simply by painting the roof—to match or harmonize—each time the sides and trim of the house are painted.

FOLLANSBEE STEEL CORPORATION

PITTSBURGH 30, PA.

Always Leading... Always Progressing



LOOKING ahead into the New Year, we at Independent Register take the opportunity to sincerely thank the Heating Jobbers and Installers who have given us their patronage over the past 54 years.

Only the good will and the support of our many friends and customers have made possible the continuance of our slogan: "Always leading—Always progressing."

Immediate personal attention is given to all orders—large or small. *We intend to keep it that way.*

Dependable service and prompt deliveries have been a motto with us. *We intend to keep it that way.*

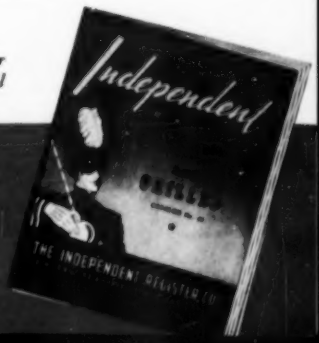
While not all styles and sizes shown in our catalog are carried in finished stock, we maintain adequate parts for immediate assembly and prompt shipment. *We intend to keep it that way.*

Independent "Fabrikated" construction provides uniformity of design in wall, baseboard and floor registers and grilles. *We intend to keep it that way.*

The Independent catalog* details and describes the complete Independent line for your convenience and ordering.

For 1953 as well as the years that follow—we intend to do our utmost to continue to deserve your support and good will.

* *If you do not have a copy, your request will place one in the mail to you—promptly.*



"Always Leading...Always Progressing"

THE INDEPENDENT REGISTER CO.

3747 East 93rd Street • Cleveland 5, Ohio



Claude Klingaman, right, owner of Klingaman & Sons, talking it over with Honeywell representative Bill Reilly

"90% of my customers are now asking for Electronic Moduflow"

—says Claude Klingaman, Gary, Indiana's biggest dealer in electronic controls

"In the last year or two, 9 out of 10 home owners buying from us have insisted on Honeywell *electronic* controls for their heating plants.

"This high percentage of sales on Electronic Moduflow surprises a lot of dealers. They quite naturally assume I cater exclusively to the *carriage trade* out here—that all my installations are in $50,000 homes.

"Nothing could be further from the truth.

"Here in Gary, my customers are mill and steel workers and small store owners. And they don't build expensive homes.

"The real reason I sell Moduflow is quite simple. I *concentrate* on selling it.

"I show customers how, with an Electronic Moduflow system, the heat inside their house is varied; how they get a constant flow of regulated heat, *adjusted automatically*, according to the weather outside. And I show them the special, super-sensitive Electronic Weathercaster that is installed on an outside wall of their house.

"*That's why* I'm able to sell Moduflow to 9 out of every 10 customers!"

H HONEYWELL

Another Plus-Profit Idea from Honeywell

Here's how Electronic Moduflow works— and why it's easy to sell!

Tests show that if indoor temperature is merely *held constant,* as the temperature outside falls, you feel chilly and uncomfortable.

This is because, as the walls of a house become colder, the rate of heat loss from the body through radiation becomes greater. Electronic Moduflow, with a thermostat outside the house, solves this problem by *raising* indoor temperatures just enough to compensate for temperature drops outside; and, on the other hand, by *lowering* indoor temperatures as temperatures outside rise.

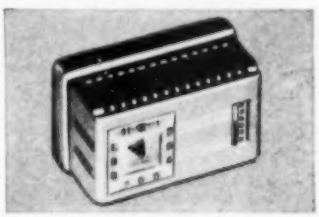
By automatically varying indoor temperatures, Electronic Moduflow accomplishes what people have been trying to do for years through constant manual thermostat adjustments!

It is 28 times more sensitive than mechanical systems of control. It operates the burner in *timed cycles,* matching exactly the needs of the weather; thus providing virtually constant air circulation and eliminating hot ceilings and cold floors.

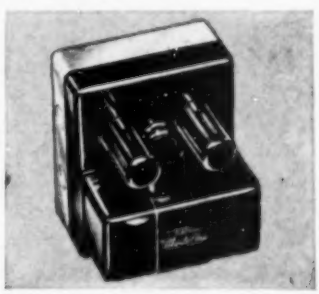
Electronic Moduflow is simple to install for any heating dealer or electrician. It has a simple circuit, is easy to wire and adjust. And being electronic, has few moving parts and nothing that can wear out or break down. Service problems with Moduflow are negligible.



Electronic Weathercaster. Mounted outdoors, it senses changes in outside temperature electronically and sends signals inside to Electronic Relay Amplifier.



Electronic Chronotherm. Mounted indoors, senses changes inside house electronically, and sends signals to Electronic Relay Amplifier. Also provides automatic night set back, automatic morning pick up.



Electronic Relay Amplifier. "Interprets" signals from inside and outside controls, correlates and balances them, and sends them on to heating plant.

This kind of customer reaction always brings you more Electronic Moduflow sales!



Mrs. Carl Ihle, Gary, says:
Getting Electronic Moduflow was the smartest thing we did when we built our home. We now live in perfect comfort regardless of how cold it gets. Everything is done automatically."



Mrs. Edward Masak, Gary, says:
"Wonderful! That outdoor thermostat is almost unbelievable. It *keeps up* with the weather without our ever doing a thing. Now our friends all wish they had one!"

Look ahead—look into this latest wonder in scientific heating. Call your nearest Honeywell office for detailed information and application data—or write Honeywell, Dept. AA-1-02, Minneapolis 8, Minn.

MINNEAPOLIS
Honeywell

First in Controls



Here's the new oil-fired and

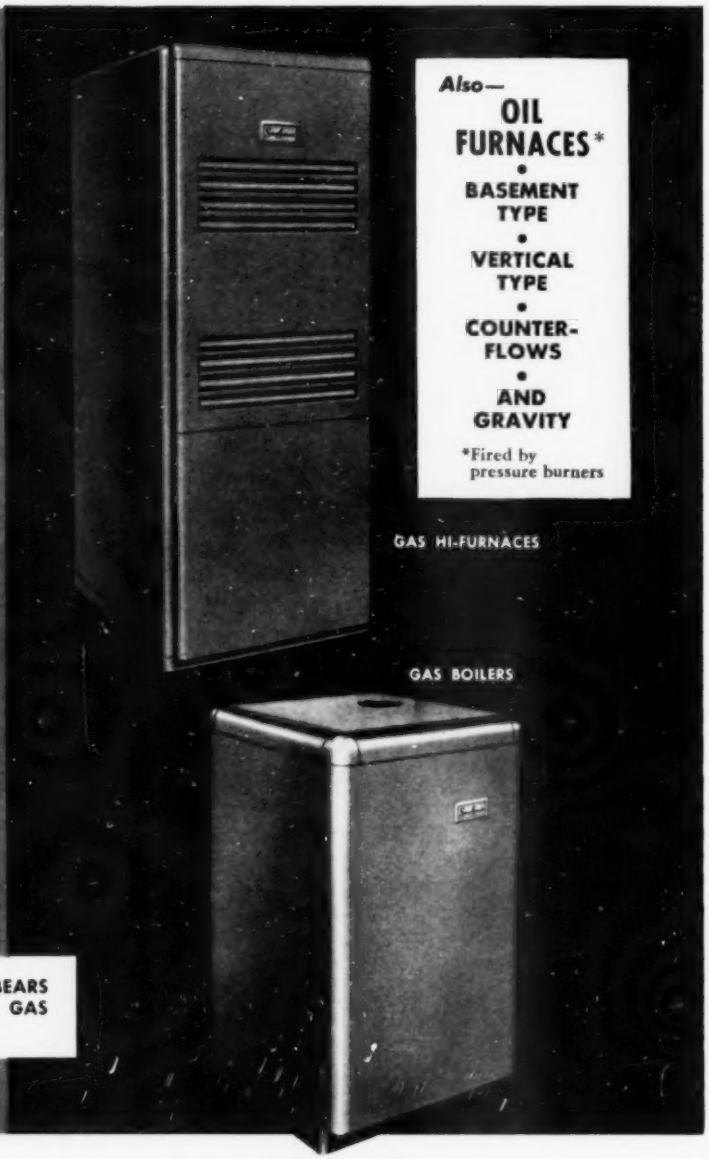
IT'S A LINE THAT'S BUILT TO SELL!

Just look at all these Silent Automatic advantages: Offered by one of the most respected automatic home heating manufacturers in the country . . . Sold under a name that means *quality* to the buying public . . . Competitively priced . . . Soundly engineered for lasting service . . . A model and size to fit nearly every home heating requirement . . . Distribution set-up that insures delivery of units when and where you want them.

DESIGNED FOR FAST, EASY INSTALLATION!

Yes, Silent Automatic products were designed with the dealer in mind. No highly skilled installation crews are needed to install and service this advance-engineered equipment. Simpler construction means greater customer satisfaction, fewer call-backs, more word-of-mouth advertising for you!

ALL SILENT AUTOMATIC GAS-FIRED EQUIPMENT BEARS THE SEAL OF APPROVAL OF THE AMERICAN GAS ASSOCIATION.



Also—

OIL FURNACES*

- **BASEMENT TYPE**
- **VERTICAL TYPE**
- **COUNTER-FLOWS**
- **AND GRAVITY**

*Fired by pressure burners

GAS HI-FURNACES

GAS BOILERS

SEE A SELECTION OF SILENT AUTOMATIC MODELS ON DISPLAY AT THE INTERNATIONAL HEATING AND VENTILATING EXPOSITION, CHICAGO, JANUARY 26-29. THEY ARE QUALITY PRODUCTS OF TIMKEN SILENT AUTOMATIC DIVISION, THE NATION'S LEADING MANUFACTURER OF AUTOMATIC HOME HEATING EQUIPMENT!

Silent Automatic brand of gas-fired heating equipment!



Now To Be Made Available To Wholesalers For Resale To *ALL Heating Dealers!*

A great name and a great line! It's a team designed to boost your profits, and here's the news-making story:

Timken Silent Automatic Division offers a new brand of automatic home heating equipment that *any* heating dealer can offer his customers. These outstanding new units, which will be known as "Silent Automatic Products," include gas furnaces, gas boilers, gas conversion burners, optional oil-gas furnaces and oil conversion burners. They will be sold to the trade through wholesalers only.

Dealers! Contact your nearest wholesaler, make arrangements to handle this famous name line, and you'll be set for the fastest sales of quality equipment you've ever known. Silent Automatic Products are priced to sell, and they're *going* to sell. Prospects will be told of their advantages through a hard-hitting advertising campaign. Get in at the start of a good thing—find out *today* what Silent Automatic can do for you!

Silent Automatic
HEATING EQUIPMENT
TIMKEN SILENT AUTOMATIC DIVISION
THE TIMKEN-DETROIT AXLE COMPANY
General Offices, Jackson, Michigan

Wholesalers! Write R. E. Loebell, national sales manager, Silent Automatic Products, Jackson, Mich., for information on this money-making new line.

Dealers! Write R. E. Loebell, national sales manager, Silent Automatic Products, Jackson, Mich., for the name of your nearest wholesaler.

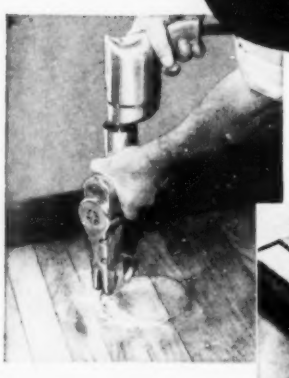
R C S SUPER SAW

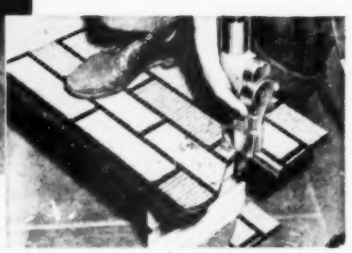
AIR COOLED
PATS. PEND.

Saves you more actual time, right on the job, than any other tool in your kit!



The ALL-PURPOSE "roughing-in" POWER SAW





NO STARTING HOLE NEEDED CUTS DIRECTLY INTO MATERIAL!

Just hold the Super Saw tightly against the material and use the guide as a fulcrum to "rock" the tool into a vertical position. Roughing in for toilet bowl through oak flooring, for instance, is completed in less than three minutes!

CUTS RIGHT THRU IMBEDDED NAILS, CUTS ALMOST ALL MATERIALS

Wood, even with imbedded nails, plaster, transite pipe, formica, ebonite, iron pipe, sheet metal and a host of other materials are easily and quickly cut with the Super Saw—even in those hard-to-get-at places which prevent a full size saw stroke!

FITS HEAVY DUTY 1/4" OR 5/16" DRILL

Simply insert the drive shaft into the drill chuck (2,000-5,000 R.P.M.), tighten chuck and the Super Saw is ready for use. (Also accommodates air drill or flexible shaft equipment.) Over-all length is only 10¾" and the Super Saw weighs only 3 pounds 6 ounces.

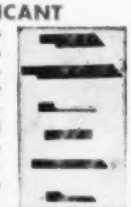
BUILT FOR CONSTANT DUTY OPERATION

Built-in blower keeps the Super Saw comfortably cool even when used continuously and air stream is directed so that chips or saw dust do not obscure the work. All friction surfaces are of oilite, phosphor bronze or high speed ball bearings; all wearing parts are replaceable.

SUPER-SAW BLADES AND LUBRICANT



Six standard blades of various lengths, tooth sizes and thicknesses give Super Saw its extreme versatility and keep blade replacement costs at a minimum. Special Super-Saw non-fluid lubricant is supplied in tube which screws into grease fitting in Saw case: "one-shot" lubrication saves time, gives complete protection to moving parts.



R.C.S. TOOL SALES CORPORATION
JOLIET, ILLINOIS, U.S.A.

Try it Yourself! See the Super Saw at your Jobbers! Inspect it, try it! You'll agree that no other tool offers Super-Saw's lifetime construction at such low cost . . . no other tool provides such drastic reduction in labor costs! Send the coupon today!

R. C. S. Tool Sales Corporation
Joliet, Illinois

Gentlemen:

Please send us Bulletin 1A and name of the nearest Super Saw distributor.

Name .....

Address .....

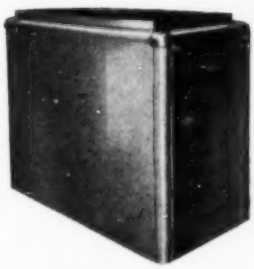
City ..... Zone .... State .....



Get those larger profits with large capacity Conditionairs

GENERAL MOTORS
DELCO-HEAT

DA Oil Conditionairs—Here is the most outstanding line of oil-fired Conditionairs on the market today. This series is available in 5 models with capacities from 85,000 to 200,000 Btu per hour output. The DA models feature the Rotopower Unit which combines all moving parts of the burner in a single, compact, sealed unit which can be easily removed for inspection or adjustment. Heavy gauge furniture steel cabinets are beautifully finished in Delco-Green baked enamel.



GA Gas Conditionair—Delco-Heat distributors are ahead of all competition with this line of de luxe gas-fired Conditionairs. The GA Series includes 5 forced warm air models with capacities from 62,500 to 210,000 Btu input. Outstanding selling features include 12-gauge Multi-Rad heat exchanger, double ribbon type burner, built-in draft diverter, Delco Appliance Rigidframe Motor and rubber-mounted blower and motor.



Delco-Heat manufactures a complete line of oil and gas-fired heating equipment for any type heating system, any modernization job

More and more alert installers of warm air heating equipment have discovered a fertile and highly profitable market for large capacity Delco-Heat Conditionairs in large size homes, whether new or being modernized. You can, too, with Delco-Heat.

Delco Appliance makes a complete line of exceptionally fine, large size forced warm air furnaces for oil or gas fuels. DA oil-fired Conditionairs are available in capacities up to 200,000 Btu per hour output and the GA Series of Conditionairs are available in a wide range of capacities up to 210,000 Btu per hour input.

The high quality of all Delco-Heat equipment, its flexibility of installation, Delco's reputation for dependable service plus low competitive prices give every Delco-Heat distributor a strong selling basis to build a more profitable business, and especially with the large capacity units. For complete information about the money-making possibilities of a Delco-Heat franchise, send coupon below.

For a good deal DEAL WITH DELCO



Conversion Gas Burners | Oil-Fired Water Heaters | Conversion Oil Burners | Domestic Water Systems | Oil-Fired Boilers

CLIP AND MAIL TODAY!

DELCO APPLIANCE DIVISION,
General Motors Corp., Dept. AA, Rochester 1, N. Y.
Please send me information about a Delco-Heat franchise.

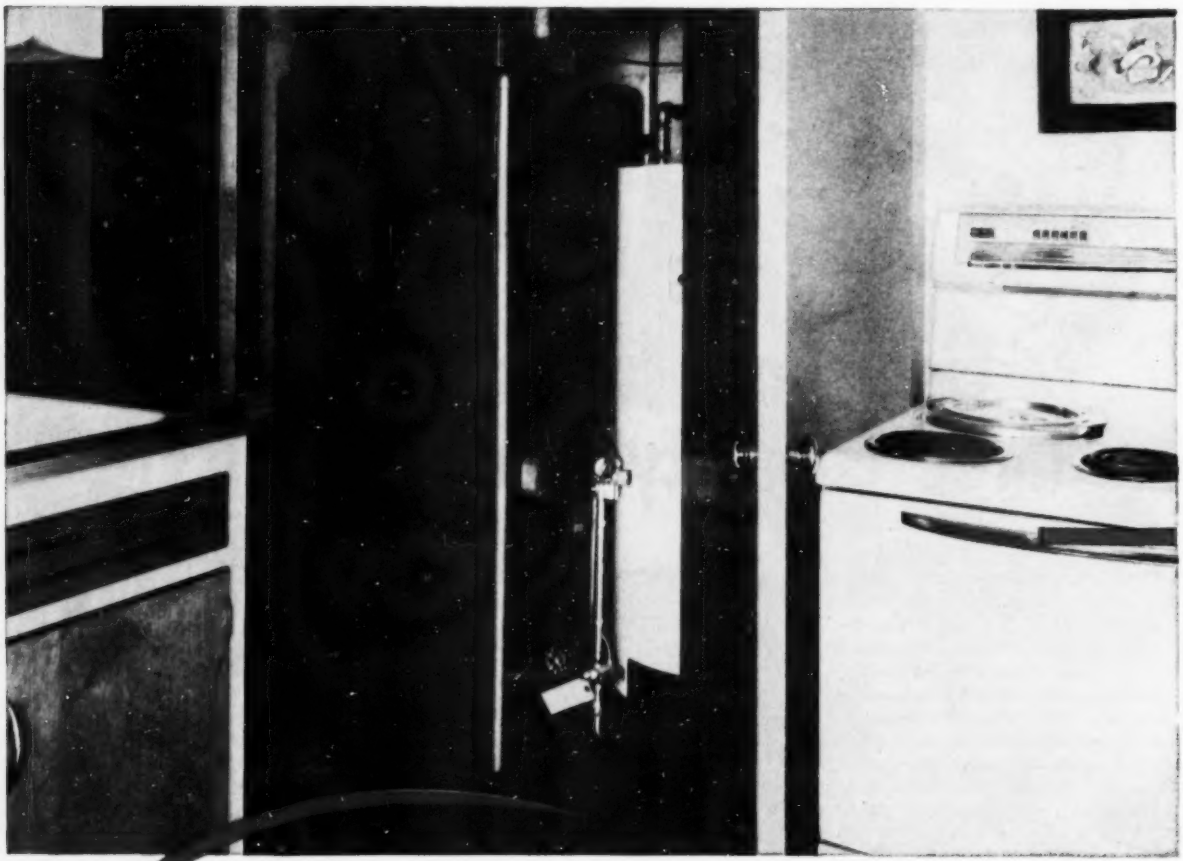
*Name*_____

*Firm Name*_____

*Street*_____

*City*_____ *Zone*____ *State*_____

In the year 2000



SEE THE CONVINCING EVIDENCE FOR YOURSELF

INTERNATIONAL HEATING, VENTILATING AND AIR CONDITIONING EXPOSITION

CHICAGO...BOOTHS 1337-1339-1343

Janitrol **Gas-Fired Cast Iron Conditioners • Steel, Oil and Gas-Fired Conditioners and Boilers**
Gas Gravity and Floor Furnaces • Gas Unit Heaters and Conversion Burners

this ®Janitrol all-steel heat exchanger could still be in operation!



Here's remarkable proof of Janitrol's human life-span* durability . . . No other equipment is backed by this calculated performance!

After eleven years service, a Janitrol steel conditioner was removed from a New York State Housing Project and tested by one of the country's leading research institutes. By exacting, microscopic examination and measurement, it was found that weight loss due to pitting and corrosion of the steel heat exchangers was *less than standard mill rolling tolerances allowed for this steel.*

While this unit used a mixed gas with a sulphur content averaging 8 grains, the maximum pit penetration rate was only 0.62 mil per year indicating over 50 years of life expectancy.

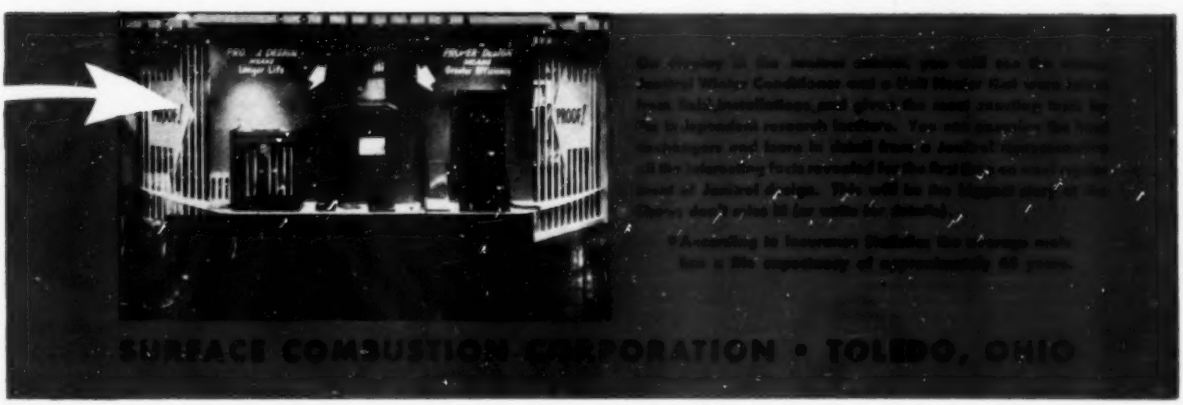
Therefore, heat exchangers of this Janitrol design, installed under similar circumstances could be expected to last beyond the year 2000.

It must be remembered that no other gas-fired conditioner has the unique Janitrol design of heat exchanger and burner combination principle that minimizes the possibility of corrosion and burn-outs by maintaining even metal temperatures from the bottom to the top of the heat exchangers.

So, these results cannot be obtained from ordinary "fire-box" design equipment . . . commonly short-lived victims of corrosive condensation and early burn outs.

DURABILITY DEPENDS ON DESIGN NOT METAL THICKNESS ALONE!

Here then, is further evidence of Janitrol Complaint-Free Engineering, a result of tireless effort to provide a better, low cost conditioner that will outlast the home mortgage!



THE BEST IN HAND TOOLS MEANS

W. A. WHITNEY

W. A. Whitney tools are your best bet because they are simple in design, sturdily constructed for the toughest uses, well balanced for easier handling, made from drop forgings of high grade alloy steel on all main parts, heat treated on all wearing parts, and unconditionally guaranteed against defects in material and workmanship. Our trade mark on every tool is your assurance of entire satisfaction and the utmost in service. Please write us today for our complete catalog.



CHICAGO STEEL SLITTING SHEAR

For slitting long sheets and for cutting steel bars, band iron, etc. Main frame one piece solid steel with offset for clearance in cutting long sheets. Capacity 3/16 x 2" bars, 10 gauge sheets. Blades are made of high grade tool steel. Equipped with adjustable hold down



NO. 1 PUNCH

Capacity ⅜" hole through ¼" iron
Length 34". Wt. 25 lbs. Depth of throat 17⅞"
Punches and dies ⅛" to 9/16" by 1/64"



No. 4-B TINNER'S PUNCH

Capacity ¼" hole through 16 gauge iron
Length 8½". Wt. 3 lbs. Depth of throat 2"
Punches and dies 1/16" to 9/32" by 1/64"



T-12 TINNER'S RIVETING HAMMER — 1202



PUNCHES

Whitney Punches For Ball Bearing Screw Punches

No.	Sizes	Dimensions H.	B.	Inches L.
10-1/8	to 1/2 by 32nd	5/8	1/2	1-3/16
20-1/8	to 11/16 by 32nd	7/8	11/16	1-3/4
40-3/16	to 1 by 32nd	1-3/16	1	2-5/16



PUNCHES

Whitney Punches For Lever Punches

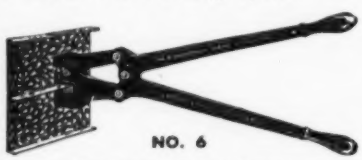
No.	Sizes	Dimensions D.	Inches L.
1	1/8 to 9/16 by 64th	9/16	2-3/8
*2	3/32 to 1/2 by 64th	1/2	2-3/8
4	1/16 to 9/32 by 64th	5/16	1-3/16
5	1/16 to 9/32 by 64th	9/32	1-1/4
*6	1/8 to 9/32 by 32nd	1/2	2-3/8
7	1/8 to 7/16 by 32nd	7/16	1-7/8
7-1/2	1/8 to 7/16 by 32nd	1/2	2-3/8
8	1/16 to 7/16 by 64th	7/16	1-15/16

*This punch used in No. 2 Channel, Close Corner No. 2, Close Corner Channel, No. 6 and Imperial No. 8.



NO. 2 PUNCH

Capacity 5/16" hole through ¼" iron
Length 23". Wt. 14 lbs. Depth of throat 1-11/16"
Punches and dies 3/32" to ½" by 1/64"



NO. 6

Skylight, Ventilating and Tank Flange Punch (Especially adapted for button punching)
Capacity ¼" hole through 3/16" iron
Length 26½". Wt. 10½ lbs. Depth of throat 1⅝"
Punches and dies ⅛" to 9/32" by 1/32"



T-18 TINNER'S SETTING HAMMER — 1802



DIES

Whitney Dies For Ball Bearing Screw Punches

No.	Sizes	Dimensions D.	Inches H.
10-1/8	to 1/2 by 32nd	13/16	15/32
20-1/8	to 11/16 by 32nd	1-1/4	21/32
40-3/16	to 1 by 32nd	2-1/8	15/16



DIES

Whitney Dies For Lever Punches

No.	Sizes	Dimensions D.	Inches L.
1	1/8 to 9/16 by 64th	1	2
*2	3/32 to 1/2 by 64th	7/8	1-3/4
4	1/16 to 9/32 by 64th	7/16	3/4
5	1/16 to 9/32 by 64th	7/16	3/4
**6	1/8 to 9/32 by 32nd	9/16	1-5/8
7	1/8 to 7/16 by 32nd	3/4	1-7/16
7-1/2	1/8 to 7/16 by 32nd	3/4	1-7/16
8	1/16 to 7/16 by 64th	11/16	1-1/4

*This die used in No. 2, Channel, and Imperial No. 8.
**This die used in No. 6, Close Corner No. 2 and Close Corner Channel.
When ordering punches be sure to specify size of punch and number of tool in which punch is to be used.



CHANNEL IRON PUNCH

(A companion to No. 2 Punch)
Capacity ¼" hole through ¼" iron
Length 24". Wt. 17 lbs. Depth of throat 17⅞"
Punches and dies 3/32" to ½" by 1/64"



NO. 8-B PUNCH

Capacity ¼" hole through ⅛" iron
Length 18½". Wt. 7½ lbs. Depth of throat 2"
Punches and dies 1/16" to 7/16" by 1/64"

NO. 91 BENCH PUNCH

Capacity ½" hole through ¼" iron
¼" hole through 3/16" iron
2" hole through ⅛" iron
Weight 82 lbs. Depth of throat 5"
Punches and dies ⅛" to 2"

CHANNEL IRON
2½" Flange x ¼" Web

Angle Iron
2½ x 2½ x ¼"



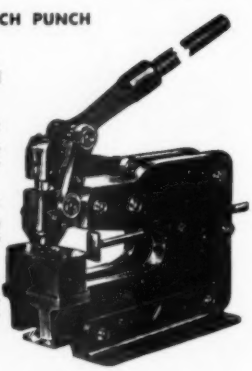
NO. 92 BENCH PUNCH

(Uses No. 91 punches and dies)

No. 92 Weight 165 lbs. Depth of throat 10"

No. 93 Weight 500 lbs. Depth of throat 18"

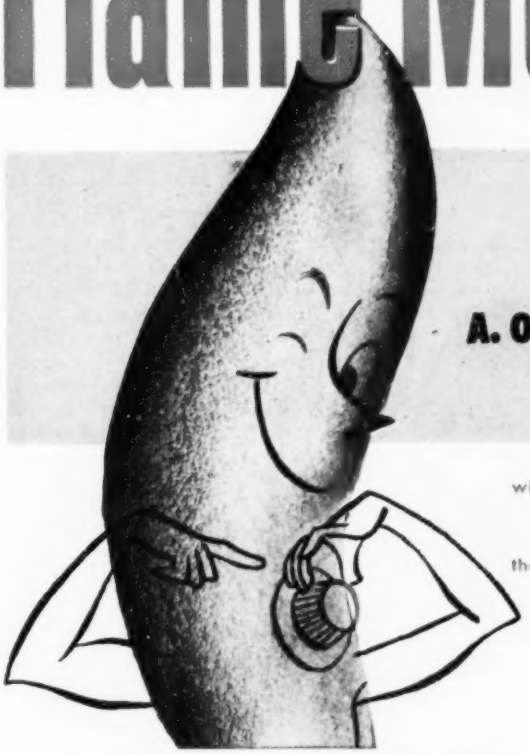
No. 94 Weight 675 lbs. Depth of throat 24"



W. A. WHITNEY MFG. CO.

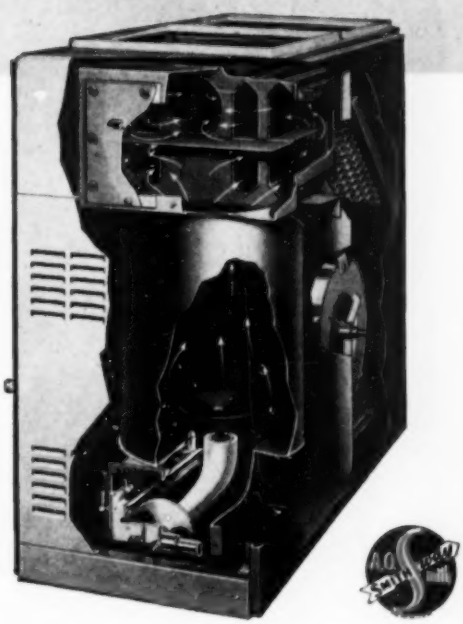
636 RACE STREET
ROCKFORD, ILLINOIS

Flame Modulation!



Provided only by the
A. O. SMITH WINTER AIR CONDITIONER

with the
Flame
that Tunes
Itself



Here's the furnace you've been wanting to sell! The warm-air furnace that automatically compensates for heat losses as they occur *without on-and-off burner cycles!*

It's the only winter air conditioner with a flame that tunes itself continuously to heating needs, the furnace that keeps up with the weather . . . that "thinks for your thermostat"!

Three exclusive components make this kind of furnace possible and provide perfect "LIVING-LEVEL" HEATING. They are: (1) *Magic Heet* Control which continuously measures the rate of heat loss and automatically adjusts input of gas to the (2) *Modu-flame Burner* which provides the precise amount of heat required, and (3) *Duo-Level Blower* Control which automatically varies the velocity of constantly circulating filtered air in accordance with the heat output.

As a result, indoor comfort is kept uniform, constant, regardless of outdoor temperature fluctuations.

In the A. O. Smith Winter Air Conditioner you offer de luxe construction for heavy-duty service and permanence; an all-welded, hi-efficiency heat exchanger with more heating surface; and clean, compact design. Factory assembled, wired, tested and adjusted; ready for quick and easy installation!

For complete information, write A. O. Smith Corporation, Permaglas-Heating Division, Dept. AA-153, Kankakee, Ill.

Nothing else like it on the market!

LIVING-LEVEL HEATING MEANS

More **than automatic heat!**
More **than continuous air circulation!**
More **than mechanical burner control!**
More **than electronic temperature control!**

Low Boy and High Boy Models are approved by AGA for modulation of gas input from 40,000 to 100,000 Btu/hr.

A.O.Smith

PERMAGLAS-HEATING PRODUCTS

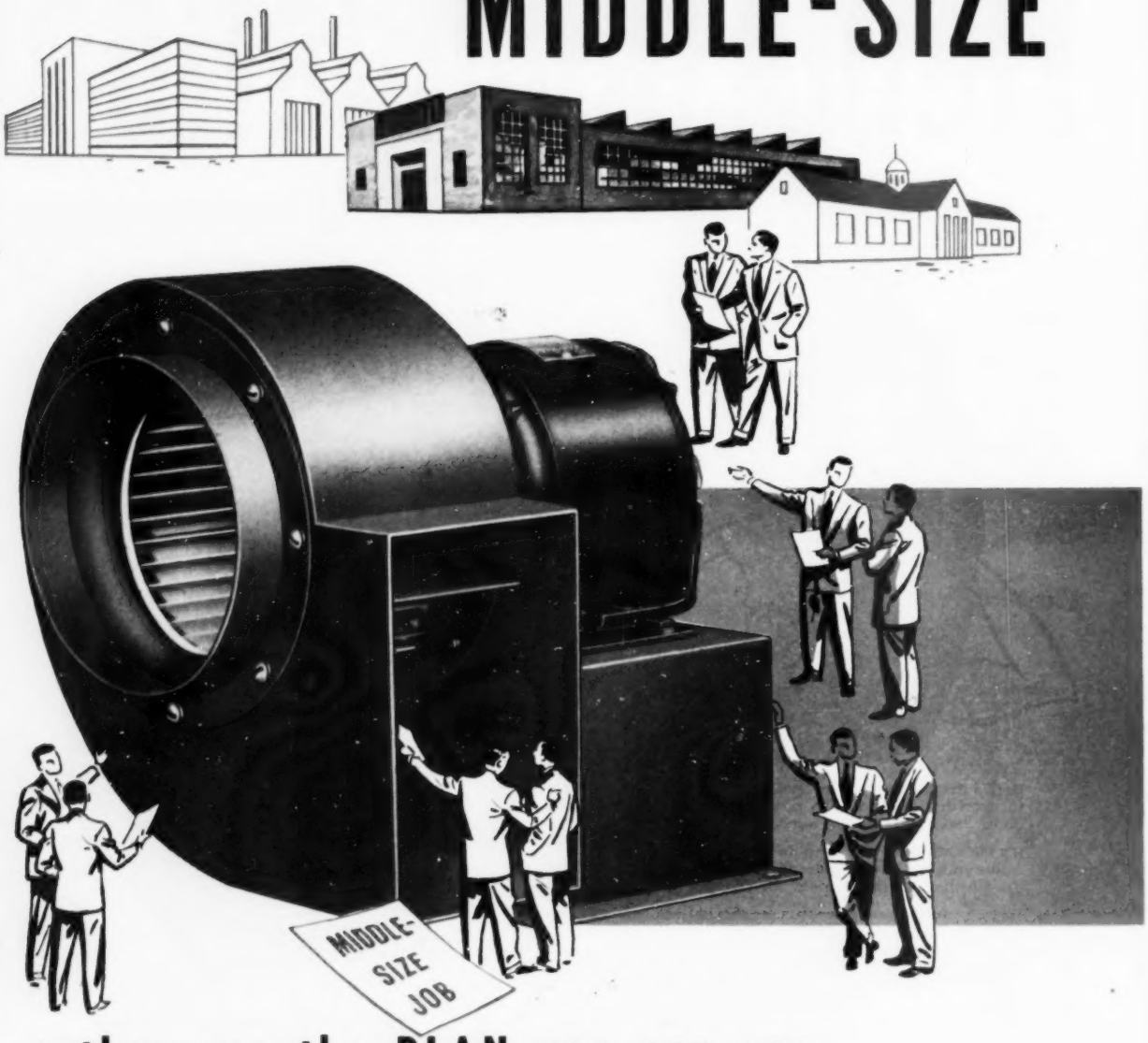
SALES: Atlanta • Chicago 4 • Dallas 2 • Denver 2 • Detroit 21 • Houston 2 • Los Angeles 22 • Midland 5, Texas • Milwaukee 8 • New York 17 • Philadelphia 3 Pittsburgh 19 • San Francisco 4 • Seattle 1 • Springfield, Mass. • Washington 6, D.C.
SERVICE: Chicago 17• Dallas 1 • Los Angeles 12 • Union, N.J.
International Division: Milwaukee 1
In Canada: John Inglis Co., Ltd., Toronto



A. O. Smith also manufactures: Home-Heating Boilers • Gas Conversion Burners • Commercial Water Heaters and the famous Permaglas Automatic Water Heater with glass-surfaced steel tank that can't rust because glass can't rust!



MIDDLE-SIZE



they use the PLAN you can use

to sell more BLOWERS

BELT DRIVE UTILITY BLOWERS



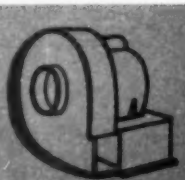
Sturdy arc-welded housings and frames. Motor pulley adjustable for variety of speeds. Weatherproof covers available. Housings convertible for various exhaust angles.

DIRECT DRIVE UTILITY BLOWERS



For general ventilation and exhaust such as in boiler rooms, restaurants, wash rooms, etc. Motors available for all types of currents. Housings constructed of 16-gauge steel.

PRESSURE BLOWERS



Used for exhaust removal of dust or grit or for high pressure conveying or cooling, etc. Blades are dynamically balanced and self-cleaning. Motors ball-bearing. Base and housing of heavy-gauge steel.

JOB PLAN

MAKES *Peerless* PART OF YOUR ORGANIZATION

Heating and ventilating distributors, dealers and contractors told Peerless the trouble they had with "middle-size" jobs — jobs that couldn't afford skyscraper engineering but needed engineered planning. Deliveries and information were too slow from manufacturer to meet customer demands for action . . . there was inadequate engineering data on performance, construction and installation . . . too little cooperation from manufacturer when detailed knowledge of product was needed. They needed a manufacturer to be a "working" force in their organizations.

To answer these problems Peerless instituted the "Middle-Size" job plan for you. The plan is this:

1. When a problem requiring technical assistance arises, just wire, write or phone Peerless, collect, and experienced engineers will furnish the desired information or recommendations quickly and concisely . . . we'll even fly a man to your location if necessary.
2. Technical data is constantly supplied to you by mail.
3. Through constant research Peerless has discovered possible new applications for electronics, radar, etc. Peerless can help you sell more of these jobs.
4. Peerless makes shipments on time, building your reputation as a dependable supplier.
5. Peerless furnishes a complete line of self-contained units . . . all manufactured under one roof, with undivided responsibility.
6. Peerless protects you with a full guarantee on each product.

This plan has been used and accepted by hundreds of distributors, dealers and contractors with profitable results. Try us out by using this "middle-size" job plan today. Give us a call, wire, or write today about one of your jobs or your present requirements.

"SMOOTHEST PERFORMERS ON THE MARKET"

Peerless Electric

FAN AND BLOWER DIVISION

THE PEERLESS ELECTRIC COMPANY • WEST MARKET ST. • WARREN, OHIO

FURNACE BLOWERS

Cut installation time and build profits by stocking Peerless Blowers . . . the sensational new unit that offers so many exclusive advantages to both dealers and wholesalers.



INDUSTRIAL EXHAUST FANS

For ventilation of factories, warehouses, foundries, etc. Extra deep venturi panel. Ruggedly built for continuous duty. Totally enclosed ball-bearing motors. Horizontally or vertically mounted.



BLOWER-FILTER PACKAGE UNITS

Used with gravity warm air furnaces. Circulates cooling air in summer as well as forced warm air in winter. Eliminates stratified air as well as helping to eliminate steaming of windows.



Don't make a move until you see the

NEW ECONOMY® line for '53!

It's the line designed with YOU in mind! This beautiful, new Economy® line has many outstanding features that make *your* selling and installation *easier* and more profitable—features that assure top performance, satisfaction and value for your customers! There's a unit for *every* need—gas, oil or coal-fired—complete winter air conditioners or gravity types—assembled or not assembled. And *every* unit is International-engineered for the fuel your customer wants to use—to deliver maximum heating efficiency, utmost economy, and *years* of trouble-free service.



Gas Lo-Boys

TEN Gas Lo-Boy models—ranging from 70,000 Btu to 210,000 Btu input—beautifully styled cabinets with rounded corners—six models shipped factory-assembled, four models shipped not assembled. AGA approved with safety controls, removable pilot burner assembly.

Gas Hi-Boys

SEVEN Gas Hi-Boy models, from 65,000 Btu to 110,000 Btu input—with choice of exposed or enclosed controls. Pilot burner assembly easily removed (even while hot) for service or adjustment. All models shipped completely assembled for quicker, easier installation. AGA approved—with all safety controls. Complete winter air conditioning for the average home—at modest cost!

Gas Counterflo

AGA approved for extra-close clearances in closet or utility room installations—ideal for perimeter heating jobs. Only 1 in. clearance on sides, 2 in. on back and 16 in. on front required for safety. Shipped completely assembled—a compact unit that has big-profit possibilities in the modern basementless home.

Gas Gravity

FOUR Gas Gravity models, ratings from 70,000 Btu to 147,000 Btu. Low in first cost . . . low in operating costs—these dependable Economy units offer your customers all the comfort and convenience of gas heat at *real* savings. Fully approved by AGA. Two models shipped assembled—others shipped not assembled.

all models convertible from gas to oil

All models convertible from oil to gas

Get full details of our 10-year warranty

Oil Hi-Boys

THREE Oil Hi-Boy models—bonnet ratings from 84,000 to 96,000 Btu—in handsome enamel cabinets. Models completely assembled at factory. Highly efficient chrome-steel combustion chambers, pressure type atomizing burners.

Oil Lo-Boys

NINE Oil Lo-Boy models, four completely factory assembled, five shipped not assembled. Ratings from 84,000 Btu to 224,000 Btu—at the bonnet to suit every home requirement. Fully automatic winter air conditioning—dependable, economical, easy to service. Attractive, green enamel cabinet cleans with damp cloth—adds beauty to any basement or utility room!

Oil Counterflo

Economical, highly efficient oil heat for the basementless home! Fully approved for close clearances—safely installed in closets for perimeter jobs. Assembled, easier to install, operate and service.

Oil Gravity

THREE Oil Gravity models, (one factory-assembled); bonnet ratings from 84,000 to 157,000 Btu. Completely automatic, low cost oil heat for every home—has rattle-free, heavy gauge steel jacket with rounded corners. A proven performer for the price-minded customer who wants reliable, trouble-free oil heat!

Also—
ECONOMY
Gas conversion burners
Oil conversion burners
Suspended furnaces
Cast iron boilers
Cast iron coal furnaces
Steel coal furnaces

Your Profit line for '53!

See your distributor — or write for free catalog and all details . . . Dept. A-1.

International heater co., utica 2, n.y.

Western Office and Warehouse, 1933 Wentworth Ave., Chicago 16, Ill.



Sheet Steel from Ryerson Quick Delivery...Varied Stocks

You'll get quick service on almost all your sheet metal requirements when you call your nearby Ryerson plant. Out stocks have been improving steadily and now include a wide variety of sheets ready for prompt shipment. And you can order them cut to any desired size, quickly and accurately.

Awaiting your call today are carbon steel sheets, both hot and cold rolled and pickled and oiled in fairly good quantity. Galvanized stocks are improving, too. And on hand in larger quantities are Ryex expanded metal as well as straight chrome stainless—which you can order in any amount without allotment.

Experienced Ryerson sheet metal specialists will gladly consult with you on any problem of application or fabrication. So call us for sheet steel and related products. We'll do our best to serve you promptly and completely.

PRINCIPAL PRODUCTS

CARBON STEEL BARS—Hot rolled and cold finished

STRUCTURALS—Channels, angles, beams, etc.

PLATES—Many types including Inland 4-Way Safety Plate

SHEETS—Hot and cold rolled, many types and coatings

TUBING—Seamless and welded, mechanical and boiler tubes

ALLOYS—Hot rolled, cold finished, heat treated. Also tool steel

STAINLESS—Allegheny bars, plates, sheets, tubes, etc.

MACHINERY & TOOLS—For metal fabrication

RYERSON STEEL

JOSEPH T. RYERSON & SON, INC. PLANTS AT: NEW YORK • BOSTON • PHILADELPHIA • CINCINNATI • CLEVELAND • DETROIT
PITTSBURGH • BUFFALO • CHICAGO • MILWAUKEE • ST. LOUIS • LOS ANGELES • SAN FRANCISCO • SPOKANE • SEATTLE

AMERICAN ARTISAN

editorial

Are Conventions Worth Attending?

MANY PEOPLE have never attended a convention because they feel that it is just a waste of time and an excuse for the "playboy" to have a good time. This is a most inaccurate description of what goes on at any of the conventions in our field. Conventions are a necessity in today's scheme of business as they bring the people of an industry together where they work toward achieving a common goal and learn to know each other more intimately.

The primary reason for a convention is to clear up the work that was started at the previous convention and to formulate plans for the coming year. Frequently, manufacturers will hold an exposition at the same time, as is the case this month when the American Society of Heating and Ventilating Engineers holds its annual meeting in Chicago, with the manufacturers of equipment related to this field exhibiting their newest products at the International Amphitheatre. Anyone attending these two events will find the time well spent.

The best way to get the most out of an exposition is to study the program, the list of exhibitors and the products being shown. Make a list of those exhibits you wish to see; list the booth numbers and jot down the names of someone at each booth that you want to be sure to talk with. Study the floor plan so that you will feel at home when you arrive at the exposition. These important preliminary steps will keep you from forgetting to see something being shown that may mean a lot to you in the near future.

When you arrive at the exposition and visit a booth, if you don't see the representative you are expecting, ask about him and leave word as to when you will be back. Talk with everyone you can. In this way, you will learn what's going on in other parts of the country. Take advantage of the free literature and other technical data and study the display models — they are usually arranged to emphasize some outstanding feature.

When you have finished the first tour of the exposition, make one more trip down each aisle and you will be surprised at how much you will notice that was missed on the first trip through.

At the convention you will want to attend each session because you will hear the nation's most qualified speakers tell about the latest trends, concepts and new developments in their fields. From their remarks you can frequently form opinions of what the next few months will have in store for your business. You will meet old friends who will tell you about the things they are doing and how they feel about the new trends. You will make new friends who will broaden your perspective and open up new fields that perhaps you would never otherwise have become aware of.

To succeed in business we must learn to develop the ability to get along with our fellow beings, to understand their problems and to have them understand ours. The art of conversation between individuals and group discussion have become increasingly important both in business and in social life. By attending conventions and expositions we can equip ourselves with ideas and skills that will enhance our productive ability and — just as important — that will help make all our contacts, both social and business, more stimulating and beneficial.

Heating Basementless Homes with Warm Air

Early attempts to provide warm floors and living areas in homes built over slab floors and crawl spaces pointed up the basic difficulties in such installations and paved the way for future progress

R. W. Roose and S. Konzo
University of Illinois

ONE OF THE most interesting phenomena of the post-war reconstruction period has been the trend toward the building of basementless houses. Prior to the war the building of one-story structures on either a concrete slab, or over a crawl space, was common in the warmer sections of the country. Since the war, however, this type of building construction has become increasingly common in the colder climates. In fact, certain advantages of a building in which all functions of the house are maintained on one floor have led to an architectural trend which most builders have come to accept as a sign of "modern" construction.

To a large extent this trend toward the elimination of the basement was influenced by the dollar cost of post-war construction. The argument has been put forth by large-scale builders that by eliminating the basement, and providing a much smaller utility room space, a house could be built that was within the pocketbook-range of the average home buyer. The trend has also been aided by widespread publicity in consumer magazines, which have accepted the absence of a basement as a feature of post-war developments.

Regardless of its origin, or the

DEVELOPMENT OF WARM AIR PERIMETER HEATING

This is the first of a series of articles showing a detailed development of the warm air perimeter type of heating system. In this series some of the published technical data resulting from investigations conducted at the University of Illinois in the Warm Air Heating Research Residences will be interpreted for the heating contractor. This research work has been sponsored by the National Warm Air Heating and Air Conditioning Association and is directed by the Research Advisory Committee of that body. In addition, some extracts will be made from the design and installation codes and manuals developed by the Installation Codes and Technical Education Committee of the Association.

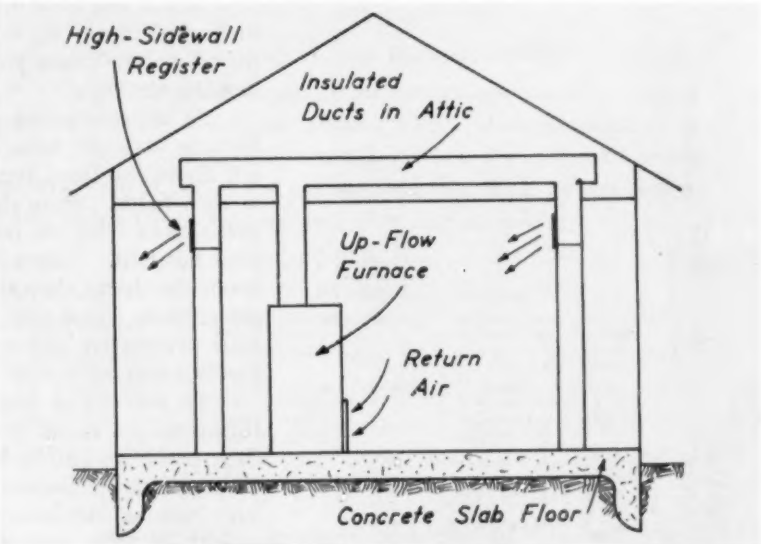


FIG. 1 — AN EASY and economical method of applying a warm air furnace to a basementless house is to use an overhead duct system attached to an up-flow furnace

Mr. Roose is Research Assistant Professor of Mechanical Engineering, and Mr. Konzo, Professor of Mechanical Engineering.

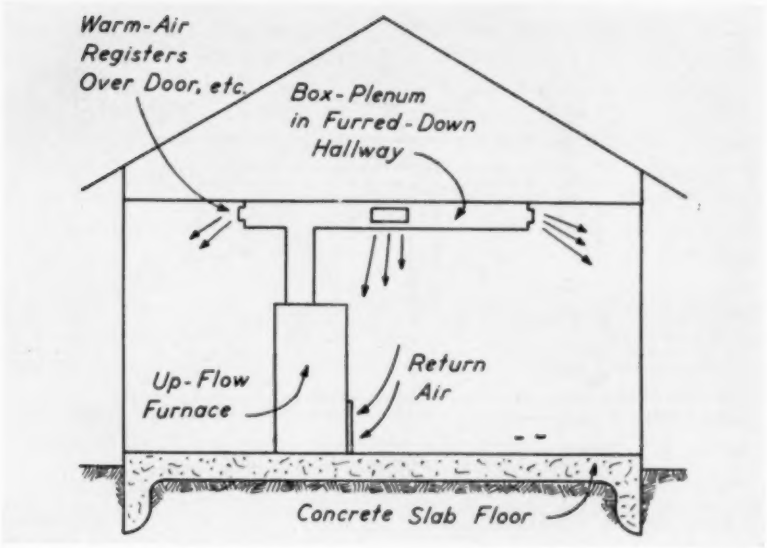


FIG. 2 — ONE OF the arrangements in which the duct system is above floor level utilizes a box plenum located below the ceiling, from which short stub ducts are connected to high-wall registers

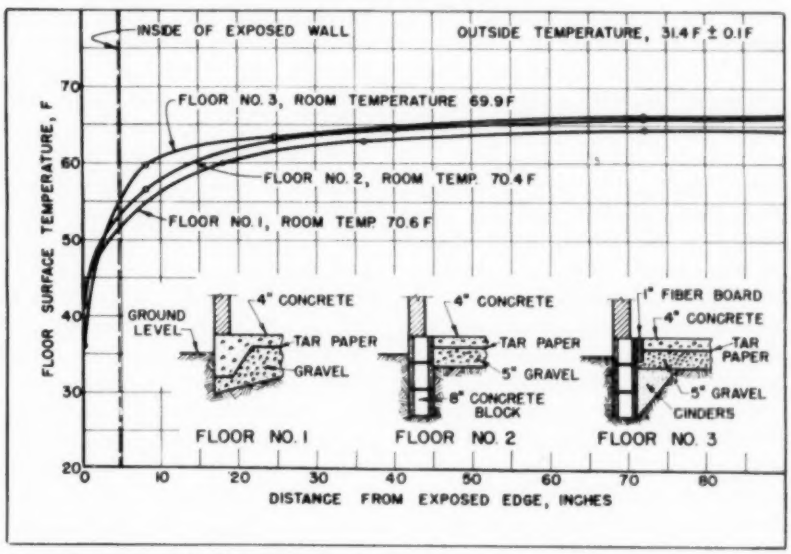


FIG. 3 — IN ONE INVESTIGATION, floor surface temperatures varied for three types of slab floor construction, and were found to decrease sharply near the exposed wall

reasons for its acceptance, the fact remains that the heating industry was faced with a new problem. This problem was that of providing warm floors and a comfortable air temperature in the living area. The steam and hot water heating industry met the challenge by the introduction of panel heating systems and baseboard radiator systems. This development, which is still in progress, required the solution to a number of knotty problems of heat transfer, thermostatic control, temperature effects on the occupants, etc. This is a story in itself, but one which is outside of the scope of this series of articles.

Early Practices in Heating Houses with Slab Floors

The warm air heating industry was also faced with this challenge of providing comfort in these basementless houses. In the beginning, attempts were made to adapt a conventional warm air heating system to a basementless house, and the results were not impressive. It is true that some of these systems gave acceptable results, and this accomplishment served only to delay the time when a full scale development program could be gotten under way. When the problem was finally and fully recognized, and all of the resources of the warm air heating industry were turned upon it, greater progress was made in warm air heating than had occurred since forced air heating was first introduced some 20 years ago. In large measure the efforts of the National Warm Air Heating and Air Conditioning Association have been responsible for this orderly development.

The purpose of these articles, therefore, is to unfold the development of a type of heating system which is specially adapted to basementless houses. The story is most interesting. Certainly, every warm air heating contractor should become acquainted with the detailed developments so that he will be familiar with practices that have been tried and found wanting as well as with the latest recommended practices.

The easiest and least expensive method of applying a warm air furnace to a basementless house was to use an overhead duct system attached to an up-flow furnace, as shown in Fig. 1. One method was to use a plenum which was extended into the attic space, and to run insulated branch ducts in the attic to the stacks. These stacks were connected to high wall registers located on interior partitions. A second method was to utilize a box plenum located below the ceiling, from which short stub ducts were connected to high wall registers, as shown in Fig. 2. In either arrangement the simplest type of return-air system consisted of a central return air intake located at the baseboard or low wall position of the furnace room. In other words, the entire warm air and return air duct system was above the floor level.

Try to Eliminate Cold Surface at Building Perimeter

The results obtained from these

conventional overhead systems were found to be acceptable in some cases, but frequently led to complaints of cold floor surfaces and low air temperatures in the living zone. R. S. Dill and his associates at the National Bureau of Standards investigated the temperatures in the floor slab, and the results are shown in Fig. 3, (redrawn by the authors from the original report). The floor surface temperatures in the middle of the test rooms were found to be fairly close to the air temperatures immediately above the floor surface. However, the surface temperatures of the floor near the exposed wall were found to decrease sharply.

Apparently, heat was conducted rapidly from the room through the concrete to the outdoors and the cold ground. These results were obtained in Washington, D. C., and for a mild winter climate.

An extension of this study was conducted at the University of Illinois by Bareither, Fleming, and Alberty, in a colder climate and with various types of floor constructions. Their results indicated that the heat flow from the slab to the outdoors could be reduced substantially by applying insulation along the edges of the concrete floor slab. The results also indicated that the heat loss from the floor slab was a substantial part of the total heat loss from the house and could not be ignored.

This was true even with no heat source placed in the floor slab. Obviously, if a heat source such as a warm air duct or hot water coil is placed in the floor slab, the heat loss from the slab floor to the outdoors could be expected to be even larger. The interesting conclusion that can be drawn from the Illinois studies is that although edge insulation is mandatory, the problem of eliminating a cold floor surface along the edge of the building was not completely solved, as long as conventional overhead heating was used.

Subfloor Ducts Bring Some Improvement

The next stage in this development process consisted of the obvious step of using a subfloor return air duct system. That is, instead of having the return air pass through the room to the furnace casing, the air was allowed to enter floor intakes which were connected to subfloor ducts, which in turn were connected to the bottom side of the upflow furnace. Fig. 4 shows this application schematically.

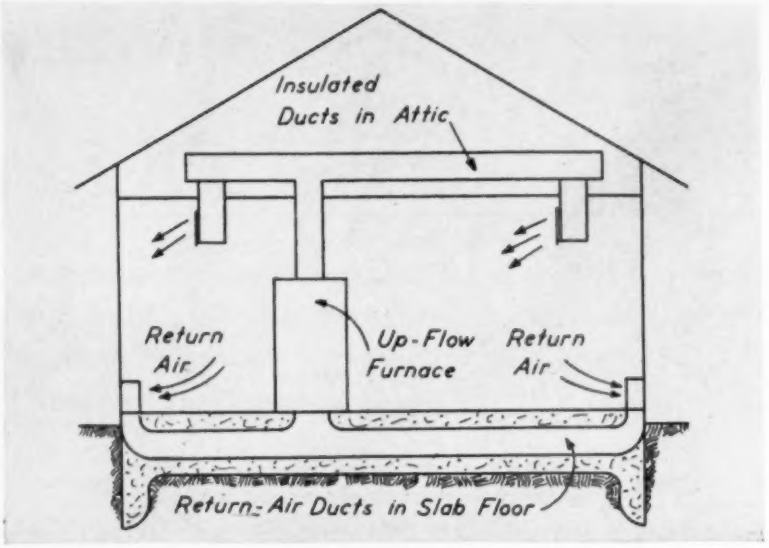


FIG. 4 — THE USE OF subfloor return air duct systems brings improved heating in some instances, particularly if ducts are located near the exposed perimeter of the house

In some instances, this resulted in an improvement, particularly if the subfloor ducts were located near the exposed perimeter of the house before being directed back toward the furnace. In this case, also, although improvement was noted, the reports from field installations were not too encouraging.

While these measures for providing comfort were being given a trial in slab floor construction, similar problems existed in heating houses built over crawl spaces.

Early Practices in Heating Houses Built Over Crawl Spaces

Although the number of houses built over crawl spaces has not been as great as those built over slab floors, a similar problem existed in maintaining warm floors and comfortable air temperatures in the living zone. In general, the problem of cold floors was not as serious in a crawl space home as in a house built over slab floors, primarily because in the former the floor is not in direct contact with the ground.

The simplest approach by conventional forms of warm air heating was by overhead duct systems, as was shown in Fig. 1 for the house with a slab floor. In both the attic duct system, as well as the box-plenum arrangement in a central hallway, the return air could be taken through the rooms into a return-air intake located above the floor level. A third arrangement consisted of the use of return air ducts located in the crawl space. None of these arrangements has been studied in the Research Residences, but reports from the field have not been particularly exciting. That is, the comfort performances were acceptable in some installations, but margin for improvement seemed to exist.

In most cases, the crawl space is provided with ventilators for the purpose of providing outdoor ventilation into the crawl space during the spring, summer, and fall seasons. This ventilation air is considered necessary for the purpose of minimizing the moisture content of the air in the space. Unfortunately, since the ventilators for the crawl spaces are not always tightly

closed during the winter, the crawl space temperatures can become quite low. In some installations, trouble with the freezing of water pipes has been encountered. In order to counteract the effect of the low temperatures in the crawl space, the use of subfloor insulation applied between the floor joists has been recommended. Such insulation did result in improvements in floor surface temperatures but did not give any noticeable improvements in the air temperatures in the living zone.

Crawl Space Warmed by Return Air

Some installations have been reported in which the return air was dropped into the crawl space, and no duct connection was used between the floor intakes and the furnace inlet. The purpose of this arrangement was to raise the temperature of the crawl space by the movement of room air through the space. This arrangement has not proven satisfactory where no attempt was made to seal the ground in an effort to prevent moisture and musty odors from entering the circulating air. Furthermore, if the ventilating grilles in the foundation walls, as well as the space between the sill plate and the foundation walls, were not tightly closed, an excessive amount of outdoor air could leak into the system. Undoubtedly, the system has some merit where proper treatment of the ground and foundation walls can be provided, but it was still short of providing the desired and expected comfort.

Briefly, therefore, the initial attempts to utilize conventional methods of warm air heating for the crawl space type of house were subject to improvement. A better method of heating was still to come.

In the meantime, the challenging competition offered by the steam and hot water industry, in the form of the floor and ceiling panel systems and baseboard radiator systems, stirred the warm-air heating industry to a search for an improvement in technique. In the next article some of these developments will be outlined, and some of the problems encountered will be enumerated.

What Do You Say?

You are invited to express your views — for publication here — on matters of interest to those concerned with residential air conditioning, warm air heating and sheet metal contracting. Address comments to Editor, American Artisan, 6 N. Michigan Ave., Chicago 2.

URGES ROUND DUCT STANDARDIZATION

The National Warm Air Heating and Air Conditioning Association looks upon the small pipe system as a form of perimeter system, and therefore would not accept the system outlined in Problem No. 1 of the article, *Heating With 4½ In. Ducts*, which appeared in the December American Artisan. This system uses special pipe and riser sizes, and places the supply opening 6 ft above the floor. The perimeter system would use either low wall or floor diffusers at the outside wall with standard fittings.

The question of adapting these systems to cooling is being studied, and some information may be forthcoming in the not too distant future. It looks as if extra runs may be required in some rooms when cooling is added. There is also the problem of what to do about the increased resistance of the cooling coil when added to that of the system, plus the requirement of increased air volume in the southern sections of the country.

The Small Pipe Committee of the association has compiled, in manual form, design data for use with 4 in. diameter pipe and component fittings. Following the adoption of the 4 in. system by the association, the Air Distribution Institute has standardized on fittings for this size of pipe.

When other sizes such as 3½ or 4½ in. diameter are used, there is no Association data available for designing of the distribution systems, and the fittings required are no longer industry standards. It is true that proponents of these systems have their own data and duct material, and that they have every right to use any size that they may desire.

When the 3½ in. pipe system is installed, it is necessary to have equipment that will develop greater static pressures than most standard units will handle. Therefore, greater care must be exercised when using pipe diameters smaller than 4 in. in diameter.

The 4 in. diameter pipe system, designed in accordance with Manual 10 of the Association, will satisfactorily handle any size job within the scope of the capacity tables provided, and when greater capacities are required than can be supplied by one outlet, multiple outlets should be used. Multiple outlets in larger rooms add to comfort conditions because of better distribution of the heated air.

I can see no real reason for pipe sizes in ½ in. increments, as standard pipe sizes are now available for 4 in. and 5 in. pipe and fittings, and there is not enough difference in areas to warrant these ½ in. sizes. A 4½ in. pipe has only 3.3 sq in. more area than a 4 in. diameter pipe. A 5 in. pipe has 7.1 sq in. more area than that of a 4 in. diameter pipe.

Standardization of pipe and fittings is of utmost importance to the fitting manufacturer and to the jobber who stocks fittings for his trade. When numerous sizes are promoted, the stocking problem becomes very acute and most jobbers are already hard pressed to find sufficient space for the bulky items.

C. L. Grandstaff, Chief Application Engineer
C. A. Olsen Mfg. Co.

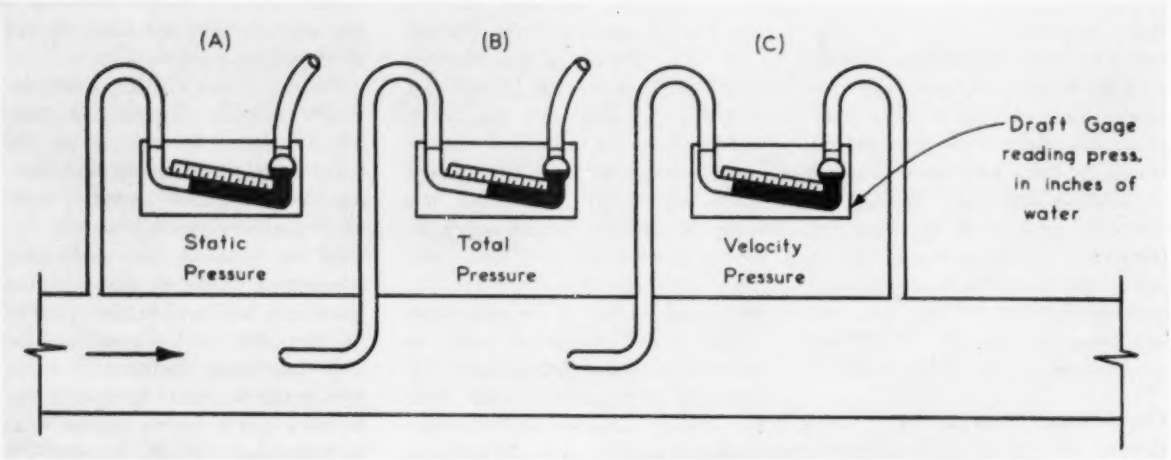


FIG. 1 — DUCT PRESSURES are usually read with draft gages. Static pressure and total pressure may be read separately, as shown in (A) and (B). Velocity pressure may be read directly, as in (C), or with a pitot tube

Good Duct Design For Cooling and Heating

To design a good duct system, a contractor must know about such fundamentals as the various types of pressure loss, how to measure them, and the special factors which affect them. He should also be able to use the simplified methods which have been developed for use in sizing ducts

BONNET, MAIN, branch, riser, stackhead — the heating contractor will recognize these words as pertaining to the duct system used to convey air from a furnace or air conditioner to a conditioned space.

In last month's article of this series we examined in some detail the problems of moving air through the conditioned space. This month we shall inspect the hidden part of the path followed by air as it recirculates — the duct system. No doubt every sheet metal contractor takes pride in his ability to design, fabricate, and install a duct system. Nevertheless, poorly designed and installed duct systems do exist and are continuing to appear. No one wants them that way. They turn out that way, however, because someone is careless and perhaps has overlooked some of the fundamentals of good duct design. It is the purpose of this article to review some of those fundamentals.

Why is good duct design important? On any job, a badly designed duct system can make impossible the achievement of a number of important goals. Comfort may be sacrificed if the system is not sized to handle the required amount of air; low noise level, if consideration is not given to isolating the system from vibrating equipment or if air velocities are not kept within recommended maximums; low first cost, if the system is not laid out with the minimum of length and fittings consistent with good distribution; economy of operation, if ducts are not properly insulated at exposed sections or fitted with well-designed transition and bend sections; and attractive appearance, if the system is not planned to blend into interior decorative schemes where it is exposed.

The motion of air in a duct is possible only when there is force to create it. The force, in this case called a pressure difference, is produced by a fan. The highest pressure in a duct system exists at the fan outlet. The lowest pressure exists at the fan inlet. Between the

fan outlet and inlet, air flows through the supply duct system first, then through the conditioned space, and finally through the return system of whatever type it may be. As the air makes this circuit, a drop in pressure occurs for two basic reasons. First, there is the friction loss of the air moving against the confining walls of the duct and of the relative internal motion of air molecules. The second factor is the dynamic loss. This is caused by sudden enlargements, contractions, and bends in the duct.

Friction losses in a duct system are proportional to the static pressure, which may be thought of as the pressure which tends to burst or collapse the duct. It is measured with a simple tube inserted into a duct at right angles to the flow, as shown in Fig. 1 (A).

Dynamic losses in a duct system are proportional to a measurement known as the velocity pressure. This is the difference between total pressure as measured by a tube placed parallel with the flow as shown in Fig. 1 (B) and the static pressure as described above. Velocity pressure may be thought of as the pressure created by virtue of air motion.

Use Draft Gages and Pitot Tubes

Duct pressures are usually read with instruments known as draft gages, indicated in Fig. 1. These instruments are filled with a special fluid (usually not water) but are calibrated to read directly in inches of water. Total and static pressures may be read separately as shown in Figs. 1 (A) and 1 (B). Velocity pressure may be read directly as shown on Fig 1 (C) or with a combination instrument called a pitot tube, as indicated on Fig. 2. The pitot tube has an impact hole in the end for obtaining total pressure and small drilled holes in the side for obtaining static pressure. The difference between the two readings is the velocity pressure.

Fig. 3 will help us to visualize the significance of both static and velocity pressures. Here is shown a fan discharging into a length of duct. At the discharge of the fan the air has a certain total pressure which is made up of the static pressure needed to overcome the friction in the duct and the velocity pressure needed to accelerate air from rest to the velocity of discharge from the fan. There are no dynamic losses since the duct is straight and of constant cross-section. At the end of the duct the static pressure has dropped to zero (atmospheric pressure), but the velocity pressure remains unchanged as the air moves from the duct at the same velocity which it had initially.

Although pressure is commonly spoken of as a certain number of lb per sq in., the use of these units when dealing with static and velocity pressures in an air conditioning duct would be inconvenient because these pressures usually are so small. For this reason we talk of a duct pressure as being equivalent to the pressure of a column of water a certain number of inches in height. For instance, we might talk of a duct system having a static pressure drop of ¼ in. water. This is more convenient than saying it has a static pressure drop of 0.009125 psi, the equivalent value

Equation Shows Pressure Drop

In an average straight unobstructed length of galvanized duct, whether round, square, or rectangular, for air flowing at standard conditions (70 F and 29.92 in. Hg barometric pressure), the pressure drop due to

AIR CONDITIONING FUNDAMENTALS

This is the fifth in a planned series of articles intended to give readers of American Artisan grounding in the fundamentals of air conditioning systems for summer and winter, and to provide specific information on all the component parts. Special emphasis is placed on how to adapt cooling to warm air heating systems.

Articles So Far Have Covered:

1. The terms used in the air conditioning field, i.e., air properties, comfort conditions, etc. (September issue)
2. The parts of the refrigeration system and how they work (October issue)
3. How to estimate cooling loads (November issue)
4. How to achieve proper air stream patterns in the conditioned space (December issue)
5. Duct design — comparison between sizing for summer and winter (this month)

Future Articles Will Treat:

1. Condensing units
2. Fans (also motors and fan speeds)
3. Filters — throwaway, cleanable, electronic
4. Cooling towers (also water valves)
5. Equipment selection
6. Electrical control systems
7. Electric controls
8. Sample problem — estimating cooling load and selecting equipment
9. Second sample problem, using different building and conditions
10. Trouble shooting — detecting malfunctioning of summer air conditioning equipment (two articles)
11. Replacement procedures for defective parts in cooling equipment (two articles)

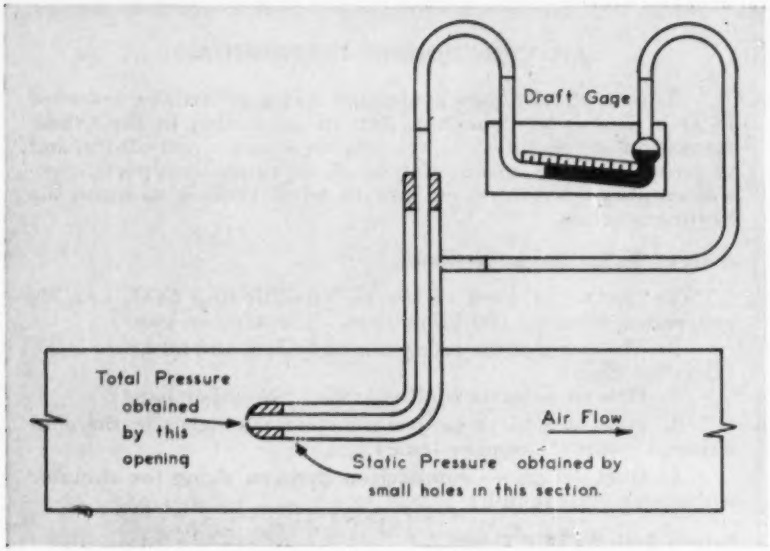


FIG. 2 — THE PITOT TUBE, for measuring velocity pressure, has an impact hole in the end for obtaining total pressure, and small drilled holes in the side for obtaining static pressure. Velocity pressure is the difference between the two

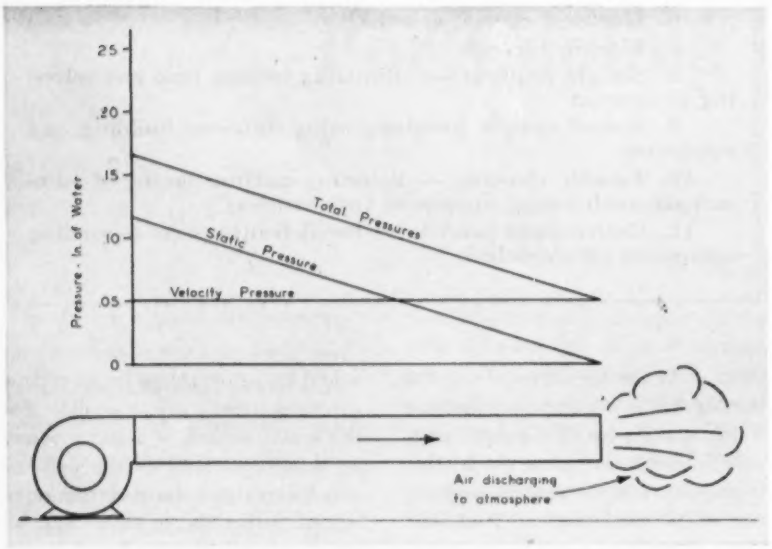


FIG. 3 — IN A STRAIGHT length of duct, the velocity pressure remains the same at the discharge end as at the fan end, though the static pressure drops to zero (atmospheric pressure)

friction (head loss due to friction) is represented by the basic equation,

$$h_f = f \times L/4m \times (V/4005)^2$$

Where

h_f = Pressure drop or head loss in in. of water due to friction
f = Friction factor based upon tests as given in the ASHVE Guide or other texts on fluid flow
L = Length of duct in ft
m = Hydraulic radius (duct area divided by perimeter)
V = Mean velocity of air in fpm

This equation has been put in chart form to make its use more convenient. The ASHVE Guide has such a chart, similar to the one shown in skeleton form in Fig. 4, along with correction factors for ducts that vary in surface roughness from that used as a basis for the equation. The chart shows the friction head loss in in. of water for round ducts 100 ft long for a range of velocities and diameters. Since square or rectangular ducts of the same hydraulic radius (area divided by perimeter) as round ducts have the same pressure losses per foot, it is simple to predict losses due to friction for any standard shape of duct. The dotted lines on Fig. 4 show how the chart is used. Thus, 800 cfm could be put through a 12 in. diameter duct resulting in a velocity of 1000 fpm and a static pressure drop of 0.175 in. of water per 100 ft.

Elbows and Transitions Cause Further Loss

When elbows and transition pieces are included in a duct system their length is included in the total length for which the head loss due to friction is calculated. These items, however, cause an additional head loss described previously as a dynamic loss which is proportional to velocity pressure. The velocity pressure for standard air (70 F and 29.92 in. Hg barometric pressure) is determined as follows:

$$H_v = (V/4005)^2$$

Where

H_v = Velocity pressure or velocity head in in. of water
V = Mean velocity of air in fpm

Since the loss through elbows and transition pieces is proportional to the velocity head, it might be expressed as

$$h_d = CH_v$$

Where

h_d = Pressure drop or head loss due to dynamic losses in in. of water
C = The number of velocity heads lost

The value of C for elbows and transition pieces of various shapes and dimensions has been worked out experimentally and can be found tabulated in the ASHVE Guide. Also, for convenience, the actual head loss for three items has been approximated in terms of the equivalent length of straight duct which would have the same pressure drop.

We have now established expressions for the two types of head loss

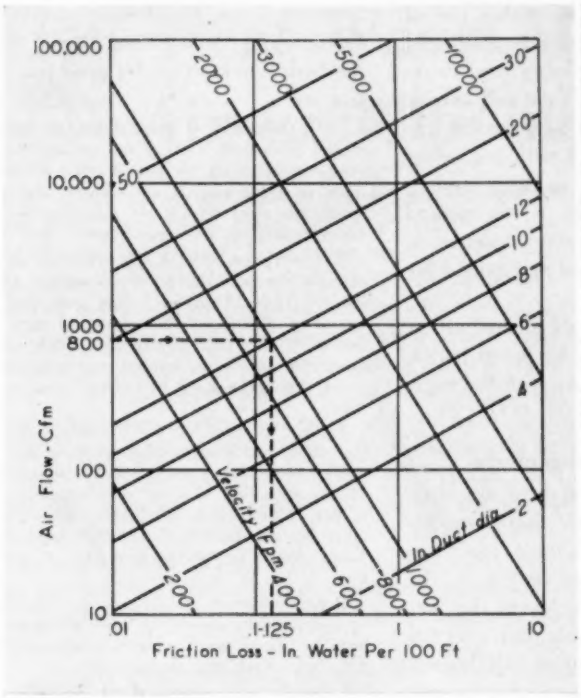


FIG. 4 — THE PRESSURE DROP due to friction, in an average straight duct, can be represented in chart form. The friction head loss is shown in in. of water (for round ducts 100 ft long) in a range of velocities and diameters

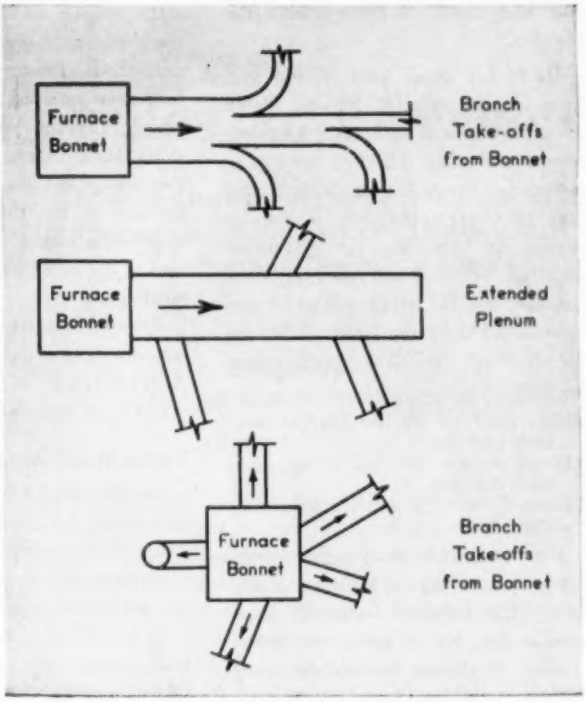


FIG. 5 — RESIDENTIAL DUCT SYSTEMS can be classified into three basic arrangements. In the first two, there is a main duct, but in one case it decreases in size and in the other, remains the same. In the third type, all branches are taken directly from the furnace bonnet

in a duct system: h_f for friction loss, and h_d for dynamic loss. We have also established an expression for velocity pressure, H_v. If we assign the symbol, H_s, to the static pressure, we can write an overall expression for what goes on in a duct system between any two points, 1 and 2, as follows:

$$H_{s1} + H_{v1} = H_{s2} + H_{v2} + h_f + h_d$$

This says simply that static head plus velocity head at point 1 equals static head plus velocity head at point 2 plus friction and dynamic losses that occur between points 1 and 2.

Diverging Stream Accomplished

In a duct system static pressure may be converted to velocity pressure and vice versa. Thus, air traveling through a duct of a given cross-sectional area will have a certain static and a certain velocity pressure. If this air now enters a part of the system of greater area, the velocity will decrease, and some of the velocity pressure will convert to static pressure, resulting in a decreased velocity pressure and an increased static pressure.

If further along the air enters a section of duct of smaller area, there will be a second conversion of pressure resulting in a higher velocity pressure and a lower static pressure.

Tests have shown that a converging stream results in a reasonably efficient conversion of pressures whereas a diverging stream, unless accomplished gradually (with the included angle of the section no more than 20 deg), can result in large dynamic losses.

To illustrate how much more serious is the expanding section than is the contracting section, assume that we have a short rectangular section of duct of the same width throughout but with the other two sides having an angle between them of, say, 30 deg. If we move air through this section one way so that it converges, we can expect a dynamic loss of about 0.02 velocity heads. If we should reverse the flow so the air now expands as it passes through the section, the dynamic loss would be about 0.6 velocity heads, roughly 30 times the first loss.

Can Use Simplified Duct-Sizing Methods

So far we have dealt only with some of the interesting engineering fundamentals upon which the theory of air flow is built. A number of aids and short cut methods have been developed which adapt these fundamentals to suit the needs of contractors.

Most heating contractors are probably familiar with the simplified method of sizing heating ducts described in Manual 7 of the National Warm Air Heating and Air Conditioning Association. This pamphlet lists certain combinations of registers, risers, branches, and trunks which are considered standard by the Association. In addition, tables are given which require for duct sizing only the actual length of duct from bonnet to boot, Btu loss from each room to be heated, and equiva-

lent length of all fittings and the register.

Ducts for small year 'round systems can be selected by the above procedure based on heating requirements and then checked and corrected by oversizing if it is found that excessive velocities would be needed to meet the air quantities required for cooling. For residential use, the following velocities are recommended by the National Warm Air Heating and Air Conditioning Association:

Main ducts — 800 fpm but not more than 1200 fpm
Branch ducts — 600 fpm but not more than 1000 fpm
Risers — 500 fpm but not more than 800 fpm

Most simplified duct sizing methods are based on one or more of the three basic methods. One of these, known as the velocity reduction method, is based on an arbitrary selection of velocities in the system, reducing them as air progresses away from the fan. This method is used for quick duct selection for simple systems. The static pressure against which the fan must operate is calculated by adding the individual resistances of various runs to determine the run with the greatest resistance. Recommended velocities given above should be used for residential work. Unless the duct system is very simple or considerable judgement is used, several trials may be needed to arrive at duct static requirements which are within the capabilities of fans in furnaces or self contained air conditioners.

A second method of duct sizing is known as the equal friction method. This method is probably the most popular for large duct systems. It is based on sizing all duct runs for about the same friction drop per ft of length. This method is most useful for factory assembled conditioning units having more or less limited static pressure available. The longest equivalent length need only be divided into the available static pressure to find the resistance per ft which is used for designing the remainder of the system.

The third method, known as the static regain method, makes use of the pressure convertibility previously described. Duct velocity, and therefore velocity head, is reduced at each branch in such an amount that the static head increase will just offset the static head loss in the preceding portion of the duct. This method requires a rather tedious calculation and is not often used or justified for small jobs.

All of the methods of duct sizing described here can be found in the ASHVE Guide, along with the engineering background.

Three Basic Arrangements

Residential duct systems are often classified by their arrangement. There are perhaps three basic arrangements as shown in Fig. 5. In the first system, air leaves the furnace bonnet in a main duct. As the main moves out, top or side branch take-offs carry air to risers. At each take-off the main size is reduced.

In the second type of system, air leaves the furnace and enters a type of main known as an extended plenum. Branches are taken from the extended plenum, but the size of it is not reduced. This construction has proven popular on small residential jobs where it is not economical to make the more elaborate take-offs of the first type of system.

In the third type of system, all branches are taken directly from the furnace bonnet and move by the shortest route to the riser or register. This arrangement is used for gravity heating and has also gained favor in recent years for homes where the duct system is in a crawl space or attic or for homes with perimeter systems where feeders branch out from a centrally located heater to supply a duct loop around the outer walls.

Eight Points to Remember

Although it is beyond the scope of this article to discuss the mechanical details of construction and installation of ducts, the subject cannot be passed without at least the recommendation that the contractor acquaint himself with and follow the various standards and codes of the National Warm Air Heating and Air Conditioning Association. Some of the basic check points for good practice are:

1. In the matter of sizing ducts for year 'round jobs, both heating and cooling air requirements must be considered. Since noise is a function of air velocity, ducts should be sized adequately following the recommendations given previously.

2. The system should carry the air as directly as possible to the conditioned space. This affects both first cost and operating economy. The minimum number of elbows and transitions should be used. On long runs, splitters and turning vanes should be used to reduce pressure losses.

3. For the year 'round job particularly, the duct system should be tight. This applies to the return as well as the supply. The cooling Btu is a lot more expensive to deal with than is the heating Btu. It must be guarded carefully. All lapped joints should be in the direction of air flow.

4. For economy and simplicity, round or square ducts should be used wherever possible. Good practice limits width-depth ratios of rectangular ducts to 6 to 1.

5. Supply and return ducts for year 'round systems should be made of rust resistant material. Cool air in ducts often causes moisture to condense on the outside.

6. Insulation of 1 to 2 in. should be applied to ducts in exposed walls or spaces where considerable heat loss or gain can affect capacity. It should also be used to prevent moisture condensation on ducts which almost always occurs near the cooling unit.

7. Dampers should be used in each branch for balancing systems initially and for seasonal change from heating to cooling if necessary. Positive locking devices should be used and both summer and winter positions plainly marked.

8. The duct system should be separated from the furnace or air conditioner with flexible joints to prevent vibration carryover.

The contractor's responsibility does not end with the design and installation of the duct system. He should make sure that the warm or cool air is supplied to the registers in the correct proportions. The procedure of adjusting the duct system is known as balancing. It can be done by means of an anemometer or air velocity meter to check the quantity of air at each register, but the ultimate test is made with thermometers to see that the several areas or rooms are held at as uniform a temperature as possible. Branch dampers are used to make major adjustments, but the registers with their adjustable louvers and valves can be very useful.

How Heat Wave Affects Air Conditioning Sales and Service

A well-known engineer tells us what happened in Dallas, where temperatures were in the 100's for 27 days

H. G. Gregerson
George L. Dahl, Architects & Engineers

THE ADMONITION THAT man shall live by the "sweat of his brow" was never more true in Dallas during the heat wave last August, when there were 27 days with temperatures of 100 F or more. The fortunate ones stayed indoors in air cooled offices and working spaces. Others just had to sweat it out. The man of the family arrived at his cooled office early and stayed late while his poor family stayed home or spent part of the day in cool theaters, stores, swimming pools or restaurants.

The air cooled home in Dallas is not uncommon but the market is far from being saturated. A dealer made the statement that only about 1 per cent of the homes having electricity have cooling. The market for package cooling units has been bullish — with every indication that it will remain that way until Dallas has a cold month of August. All the concerns making home installations have been busy. People who have central warm air heating are adding refrigeration. Others make extensive modifications in their homes in order to add cooling. Several housing developments are being built in the $12,000 and up class with air conditioning an integral part of the plans. The higher priced homes are largely planned with air conditioning a part of the home or provision is made for adding it later. And for those who do not want refrigeration, or cannot afford it, there is the evaporative cooler. Thousands of these have been purchased by people seeking cooling. When selected and operated properly, they do a fairly good job of keeping a house cool. One man went so far as to install lawn sprinklers on his roof; this gave him 10 deg of cooling.

The almost universal reaction to a hot spell such as Dallas experienced is that the service departments of refrigeration and air conditioning concerns are overworked and far behind in their calls. However, a check of several engineers with service firms said the hot spell had little effect on service work. One engineer's explanation, in this connection, is that with the extreme heat the equipment is operating continuously without the attendant stops and starts or operation of unloading devices — thereby preventing some of the opportunity for breakdowns.

Shows If Designs Are Adequate

Use of automatic capacity reduction controlled by suction pressure has introduced a new problem to the equipment operator and service man. If the cutout points are set too high, sufficient cooling to handle the conditioned spaces is lacking. I know of at least two cases where this happened. As soon as the cutout points were set low enough, adequate cooling was available.

Probably the greatest effect the protracted heat has for the design engineer is that it gives him a good chance to find out whether or not his designs for his air cooling jobs were adequate and/or properly laid out. If no complaints come in, he can pat himself on the back and consider himself a successful designer. However, it also brings out misunderstandings on the part of owners and operators as to what their equipment can do and how it should be operated. Often the design engineer gave his client all he paid for and more, and still the client is not happy. In one such case, a thorough briefing by a representative of the designing and contracting firm made a happy owner out of a disgruntled one. (I wish it were always that easy.)

Unfortunately, very few owners care to pay for equipment that is much in excess of the amount required to hold a predetermined temperature. In fact, when buildings are planned and found to exceed the budget, it seems that the mechanical equipment suffers out of proportion to its share of the cost of the building. If the calculations are accurately made and a reasonable safety factor is used, it is difficult to do any cutting in the mechanical design without seriously reducing the capacity to a point where it is doubtful that adequate cooling will be attained when outdoor temperatures soar. In order to beat the heat, many building engineers operate their equipment 24 hr a day. Others start their systems early in the morning in order to get a head start on the heat. In our own two story building, the equipment was selected on the close side because extra floors were contemplated which would kill one of the large sources of heat inflow. Indicating thermometers have shown that it takes 2 hr in the early morning for the cooling equipment to lower the temperature in the conditioned spaces to 78 F. Experience has shown that without this precooling, a temperature as low as 78 F will never be reached that particular day if the outdoor temperature rises to 100 or higher.

Inasmuch as man must live by the "sweat of his brow," there is no reason why he should not do so in cool comfort. The past season — and others — have brought the day closer when most of the homes, offices and working places in Dallas will be air cooled.

Estimating Forms Help Forecast Job Costs

N. J. Biddle
Secretary, Michigan Heating & Sheet Metal Association

Before he bids, the contractor must estimate — as accurately as possible — what the job will cost. Proper estimating forms, such as those offered by the author, make for uniformity of procedure, ease in checking information, and increased accuracy — which may save a shop thousands of dollars each year

THE PURPOSE of an estimate, as we all know, is to foretell in advance, as closely as it is possible, just what some job to be done in the future will cost. Obviously, the more attention which is paid to detail, the more accurate such an estimate will be.

Presumably the job has a set of plans and specifications which clearly describe all of the essential features and requirements. The first step in preparing an estimate is to read carefully the specifications and note all essential details on some kind of a specification data sheet. Of course, a blank sheet of paper may be used, but greater accuracy is better assured by using a carefully prepared form since it may prevent the omission of some essential detail.

Figs. 1 to 3 illustrate a suggested estimating form. Fig. 1 shows the specification data sheet, Fig. 2, the take-off, and Fig. 3, the recapitulation sheet on which the final figures of the several sheets of an estimate are assembled and built into a selling price.

These forms are suggestions only; many contractors will wish to alter them to suit individual needs. The designing of a set of practical estimating forms is an evolutionary process which may cover years of time.

SPECIFICATION DATA SHEET

Nature of Work _____ Date _____
Job Name _____ Estimate No. _____
Job Location _____
Owner _____ Address _____ Phone _____
Architect _____ General Cont'r _____ Engineer _____
Prime Bid _____ Sub Bid _____ Lump Sum _____ Fixed Fee _____ T & M _____
Alternates _____
Addendas, Number & Dates _____
Completion Time _____ Penalties _____
Method of Payment _____ Progress Payment Retention _____
Drawings, Number _____ Scale _____ Engineered layout, Yes ___ No ___
All work included in this contract shown in plans & specifications? _____
Is all Material and Equipment furnished by the contractor, Yes ___ No ___
Material, Equipment and/or Services furnished by others: Explain

Number of buildings _____ Number of Floors _____ Total Floor Area _____
Dwelling _____ Frame _____ Concealed Ducts _____
Multi Family _____ Wood Truss _____ Exposed Ducts _____
Hotel _____ Masonry _____ Suspended Ceiling, Yes ___ No ___
Commercial _____ Reinforced Concrete _____ Partitions, Frame _____
Institutional _____ Steel Frame _____ Masonry _____
Industrial _____ Structural Steel _____ Flat Slab, Beam & Column _____
Warehouse _____ Other _____ Flat Slab, Concrete Joists _____
Recreational _____ Slab on Ground _____
_____ Attic _____
_____ Crawl Space _____
_____ Basement, Full _____ Part _____
Other Data

Closing date _____ Bids go to _____
Bond required, Yes ___ No ___ Amount & Type _____
Insurance Requirements _____ Clean up by _____
Other

Architectural Drawings	Checked _____	Date _____
Specifications and General Conditions	Checked _____	Date _____
Mechanical Drawings	Checked _____	Date _____
Mechanical Specifications	Checked _____	Date _____
Job Site	Checked _____	Date _____

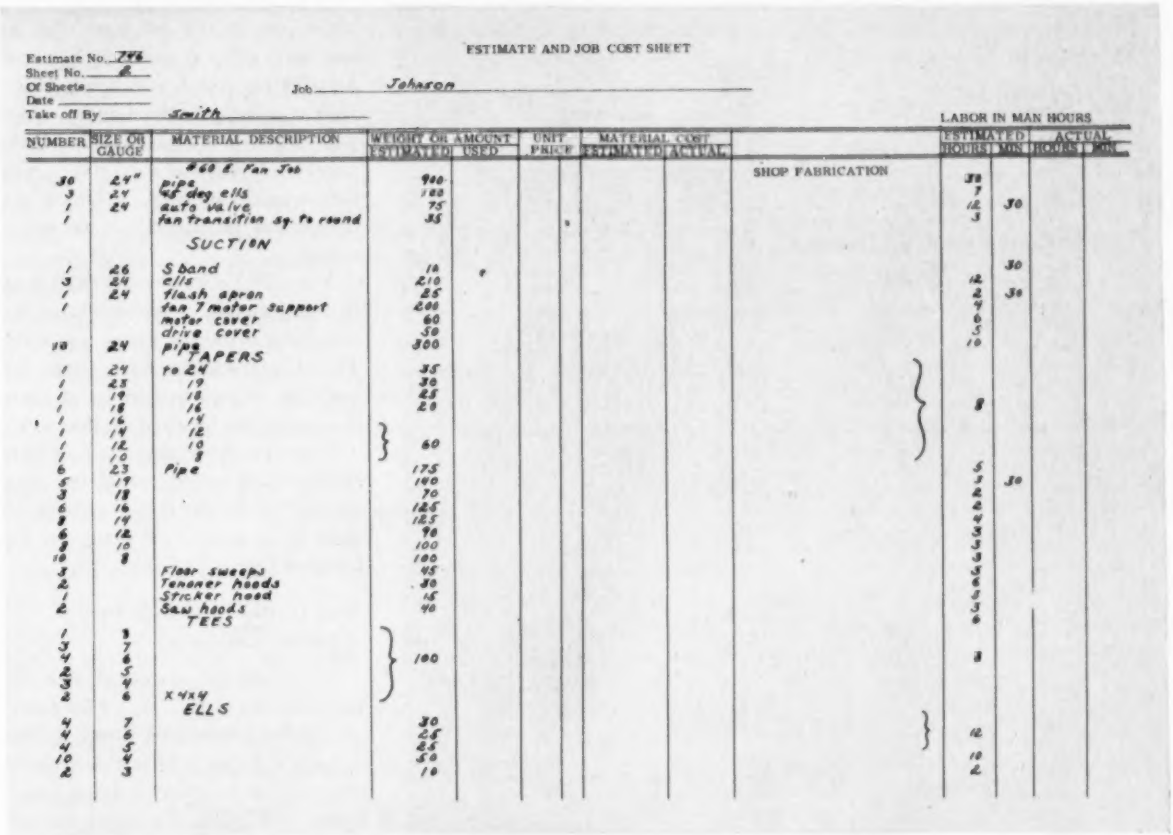
Estimators Signature _____

FIG. 1 — THE SPECIFICATION DATA SHEET serves as a reminder that all essential details, such as the scale, have been taken into account

Specification Sheet a Reminder

The specification data sheet is primarily a reminder so that all of the essential requirements of the job will be noted before attempting the material take-off.

One of the very important items is the scale. We have known many cases where a quarter inch scale was assumed when the plans and specifications actually called for an eighth inch scale. This can be exceedingly costly. It pays to go over the "specs" carefully, to have a good specification data sheet and to check every item noted on such a data sheet. Care is one of the great essentials in estimating.



ESTIMATE AND JOB COST SHEET

Estimate No. 776
Sheet No. 2
Of Sheets
Date
Take off By Smith

Job Johnson

NUMBER	SIZE OR GAUGE	MATERIAL DESCRIPTION	WEIGHT OR AMOUNT ESTIMATED	WEIGHT OR AMOUNT USED	UNIT PRICE	MATERIAL COST ESTIMATED	MATERIAL COST ACTUAL	SHOP FABRICATION	LABOR IN MAN HOURS ESTIMATED HOURS	ESTIMATED MIN	ACTUAL HOURS	ACTUAL MIN
		#60 E. Fan Job										
30	24"	pipe	900						33			
3	24	45 deg ells	180						7			
1	24	auto valve	75						12	30		
1		fan transition sq. to round	35						3			
		SUCTION										
1	26	S band	14							30		
3	24	ells	210						12			
1	24	flash apron	25						2	30		
1		fan & motor support	200						4			
		motor cover	60						6			
		drive cover	50						5			
18	24	pipe	300						10			
		TAPERS										
1	24	to 24	35									
1	23	19	30									
1	19	18	25						8			
1	18	16	20									
1	16	14										
1	14	12										
1	12	10	60									
1	10	8										
6	23	Pipe	175						5			
5	19		140						3	30		
3	18		70						2			
6	16		125						4			
8	14		165						4			
6	12		98						3			
8	10		100						3			
10	8		100						3			
3		Floor sweeps	45						5			
2		Tenoner hoods	30						6			
1		Sticker hood	15						3			
2		Saw hoods	40						3			
		TEES							6			
1	8											
3	7											
4	6		100						8			
2	5											
3	4											
2	6	X 4x4										
		ELLS										
4	7		30									
4	6		25						12			
4	5		25									
10	4		50						10			
2	3		10						2			

FIG. 2 — **THE JOB COST ESTIMATE** sheet combines a detailed, itemized listing of the material take-off and labor estimated with a listing of what was actually required

Another value of such a form is that the estimator soon becomes completely familiar with the procedure. He starts from the same point on each job and proceeds in regular order which is an added precaution against leaving out essential items. This makes for both accuracy and speed.

The take-off sheet is the foundation of the estimate, for without a proper take-off of the material requirements, there can be no estimate. Any other manner of forecasting the probable cost of a job is a guess. It can be nothing else — except in the case of a job which duplicates a job very recently done, for which accurate cost records have been kept.

Take-off Sheet a Check on Accuracy of Estimate

Since a proper estimate necessitates an itemized take-off of all materials and equipment required for a job, and since a proper accounting for that job requires a complete, accurate, itemized listing and pricing of all such items used on a job, the two may well be combined, with estimated materials and actually used materials listed in adjoining columns so that one may see at a glance whether the forecast was right or wrong in each particular case. That has been done in our estimate and job cost sheet (Fig. 2). Note that there are 11 columns on this sheet which should give ample room so that there is no crowding of items.

Column 1 is for the number of items of a given kind; column 2 is for the size or gage or other special designation; column 3 is for the itemized list of materials; column 4 is for the weight or quantity of any item which it is anticipated the job will need. Note column 5 carefully. It is for the actual amounts of material required to complete the job and is alongside the estimated amount. It will be immediately apparent to clerks, management, estimators and others where the quantities were over or under. It is a constant running correction of your estimating setup and is of the utmost value.

Column 6 is for the unit cost of the items; column 7 is for the total cost of all the items of each kind which were estimated for the job, and column 8 is for the total cost of all the items of each kind which were used on the job. Again, there is instant comparison in regard to each item.

Column 9 can be used for headings, description or for additions to the descriptive matter in column 3. It is an extra space for any required usage to avoid crowding. Column 10 and column 11 are for estimated labor and actual labor required, respectively.

Job Estimated Should Have Engineered Layout

Let's assume we are estimating the job shown on the accompanying forms, which happens to be an actual

RECAPITULATION

ESTIMATED BY _____
CHECKED BY _____
APPROVED BY _____
DATE _____

ESTIMATE NO. 746
SHEET NO. 13
OF 18 SHEETS

JOB Johnson

SHEET NO	DIVISION OF WORK	MATERIAL COST	LABOR-HOURS
2-3	Fabrication 4,320# at equals $		
4-5	Erection #60E Fan Job		
6-7	#40 GE Fan Job		
8-9	#40 Newcomb Fan Job		
10	Hog Job		
11-12	Collector		

JOB EXPENSE			
Bond		Miscellaneous	
Insurance		Material & Labor	
License		Total Material	
Permit fees		Total Labor Hours	
Pro Rata Charges		Average hourly labor cost	
Watchman		Total Labor cost	
Telephone		Total Material Cost	
Drawings		Total job expense	
Storage		Total Prime Cost	
Freight & Cartage		Overhead	
Express		Total Net Job Cost	
NUMBER OF MEN		PROFIT	
Transportation to & from job		SELLING PRICE	
Board & Room		PRICE QUOTED	
Total Job Expense			

FIG. 3 — THE RECAPITULATION SHEET summarizes information on all the other sheets, and provides the total job cost, to which must be added overhead and profit

job, and that we have gone carefully over the specifications, noting everything of importance there. The next thing is the take-off of materials and equipment for the job.

If the job has an engineered layout showing all duct runs and sizes, it is "duck soup", just a mere matter of measuring and counting. We are going to confine this article to such a job. If the job does not have an engineered layout, the thing to do, of course, is either make one or have one made and approved before commencing the estimate.

Where one starts perhaps does not make too much difference except that certain parts of the take-off supplement and check other parts. Since the job we have listed on the accompanying forms is a blowpipe job, we will follow through just as the man did who estimated the job.

Careful Listing of Materials Necessary

You will note from Fig. 2 that he started with the discharge end of one of the several dust collecting systems involved in this total job. He listed first the pipe required, then the fittings, etc.

After this came the suction end of the job, with a complete listing of all material items required right down to small details. This, in my opinion, is the ideal method of preparing an estimate.

In any event, all that is required for the material take-off is a measuring device of some kind and the ability to count the various items required.

Regarding measuring the duct runs on a job, it can be done with an ordinary rule, a scale or a wheel. I prefer the wheel, which is a device with a wheel on the bottom which you run over the plans to get the number of inches of each run. You then convert to scale. This is accurate and far speedier than using a scale.

You will notice that the unit used in this estimate is the weight of the materials, with no gages specified. This firm used standard gages for each size of pipe or fittings, so there is no problem involved on that score.

You will notice that the first item shown is 30 lengths of 24 in. pipe, weight 900 lb, and that in column 10 there is an item of 30 hours for the labor of fabricating this pipe.

Man Hours Best Unit for Labor Estimate

Let us not be concerned with the exact amount of time shown for fabricating the mentioned item. The important point is that this item is expressed in a universal figure—man hours. This is the ideal method of estimating labor for a number of good reasons.

The most important reason is that man hours, when once properly established, never have to be changed. They become a fixed unit in the mind of the estimator regardless of changing wage scales or changing economic conditions. If, now or in the future, labor times for each operation can be established, they can be integrated into an estimating system by adjustment.

When a comprehensive system of man hour units has been developed, if the degree of labor efficiency changes, all an estimator has to do is to proceed as usual with the regular man hour units and make an adjustment in the total hour figure for any such change. In addition, the workmen and every one connected with the shop can understand a man hour labor unit and can readily determine one for themselves. This is not true with labor units based upon price.

Last, man hours are universal. They can be compared from all parts

of the country, wherever similar work is done. They may vary, but the variation will almost always be because of differences in labor efficiency which can easily be compensated for. It is the relationship between the various units which make up a job which is important, for if this relationship is reasonably correct, adjustments to today's production are simple.

Getting back to our estimate, we have given a rather complete list of the items of the first of the systems in order to illustrate the estimating method. However, in this job there were 11 such take-off sheets, and 13 sheets in all. Where there are a number of loose sheets of paper lying about, it is easy to get one misplaced or completely lost. Therefore, there is a place on each sheet for a number and also space for indicating the number of sheets in the set of which this one is a part.

Recap Sheet Summarizes Job

There is left only the recapitulation sheet to consider. This is the job summary. On this sheet we show the 11 take-off sheets, the specification data sheet, and include the recap itself in the total number at the upper right (13).

The first column on the recap identifies the sheet number; the second, the division of the work; the third, the material cost; and the fourth, the total man hours from each of the sheets.

You wind up at the bottom of the third column with the total material cost. On the same or next line in the fourth column, you have the total number of hours involved in the job. This figure, times the average hourly labor cost, gives the total labor cost.

The material cost and the total job expense and the above labor figure are added together, which gives the total prime or direct job cost to which must be added the overhead and profit. It is optional whether these two latter items are separated in determining the selling price. It is the practice of many firms to add the overhead and profit in combination in the form of a percentage as shown in some of the previous articles of this series.

Another recap sheet could be used for the final accounting on the job for the purpose of summarizing the actual job experience.

The total figures for labor and weight on this job were:

	Labor	*Weight*
Estimated	2,708 Hours	17,795#
Actual job experience	2,782 Hours	15,665#

The material weight was that actually shipped out and does not allow for scrap.

The firm which did this job and which so kindly cooperated with the writer is the Marshall Blow Pipe Co., of Detroit. One of the oldest industrial sheet metal shops in the area, it is also one of the most forward looking in its stress on accurate, detailed job cost records and estimates.

Estimating Forms Save Time and Money

It is extremely important to have an accurate comparison of anticipated costs and actual costs, side by side, where they may be compared at any time with the minimum of effort. For this reason, incorporating the estimated and actual quantities side by side in forms is a practical move.

Money spent on proper estimating forms is not wasted, even if only a fraction of the form is used. It always makes for uniformity of procedure and for ease in checking up on past information. A few dollars spent on proper forms may save thousands resulting from errors which are so prone to occur when a regular routine is not followed.

[*Ed. note*: Further suggestions on estimating forms, or other forms which may increase the business efficiency of heating and sheet metal shops will be welcomed by the editor. Write American Artisan, 6 N. Michigan Ave., Chicago 2.]

Advantages of Water-Cooled Summer Air Conditioners

MANY PEOPLE contemplating the purchase of a summer air conditioner may wonder why water cooled units are recommended. Actually, it is a matter of good economics and good operating efficiency, according to the Frigidaire Corp. If a 3 hp air cooled compressor is used, it will give less cooling capacity and cost just as much to operate as a water cooled unit. In fact, a 3 hp water cooled unit has more than twice the capacity of an air cooled unit of the same size. Yet the air cooled unit will use about the same number of watts as the water cooled unit. If its capacity were increased by oversizing the motor and running it faster, then it would consume many more watts of electricity than the water cooled compressor.

Operating figures for a typical 3 hp water cooled residential air conditioning installation can be calculated as in the following example: the 3 hp motor will use 3300 watts per hr and the fan motor about 300 watts; this is a total of 3600 watts or 3.6 kilowatts; at a cost of 2 cents per kilowatt, this would amount to 7¼ cents per hr for every hour the system was in operation.

When water at 80 F is available, a 3 hp unit will require about 500 gph to cool the refrigerant. At 15 cents per thousand gallons, it would amount to 7½ cents for every hour the unit is operating. When we add the cost of electricity to that of the water, we find the cost to be about 15 cents per hr. However, when a water tower is used to recirculate about 95 per cent of the water, the cost is about ½ cent per hr for makeup water. With this saving, the first cost of a water tower can be written off. A water tower uses a pump to circulate the water; therefore 1 cent can be added for running the pump each hour. By adding the 7¼ cents in electrical cost to operate the unit to the ½ cent water cost and 1 cent circulating pump cost, the total operating cost for a water cooled system using a cooling tower is about 9 cents per hr. The 3 hp water cooled unit will have approximately twice the Btu capacity of the 3 hp air cooled unit.

In the midwest, where 1200 hr is considered an average for the operating of residential equipment, this would indicate an approximate annual cost of $108.

How to Find Perimeter Heat Loss from Slab Floors and Basement Walls

. . . is a complex process, since this loss is affected by a number of variable factors. Two formulas presented here will help the contractor predict losses more accurately

Merl Baker, J. M. O'Byrne and A. M. Levy
University of Kentucky

PREDICTION OF THE maximum heat loss from slab floors and basements is an uncertain evaluation. There are some experimental data; limited, however, in general, to the particular type of structure tested and the locality in which the investigation was made. The heat loss from slab floors and basements depends upon the type of construction, the climatic conditions and the thermal properties of the underlying soil.

The heat loss from either a slab floor or basement is primarily by conduction through the surrounding soil to the outside air. Because of the great mass of soil involved, the frequent outside air temperature changes impose complex transient heat flow conditions. Complexity of the conduction process renders the rate of heat transfer with respect to time very difficult to evaluate.

A sudden temperature drop of the outside air does not result in an immediate increased loss from the floor or basement. However, if the temperature of the outdoor air drops and remains lower for an appreciable time, the condition will ultimately result in an increased loss from the heated space. If the outside air temperature remains constant for a long period of time, steady state conduction will be approached.

Application of the Relaxation Method

The "relaxation method" for two-dimensional, steady flow conduction may be employed to approximate the temperature distribution in the soil surrounding the heated space. The boundary temperatures are taken at the inside surface of the heated enclosure and the earth-outside air interface.

Heat is conducted in a solid material along paths of least resistance between isothermal regions. For a homogeneous solid material contained between infinite parallel plane surfaces at uniform but unequal temperatures, an isothermal region is defined by a plane parallel to the faces of the solid. The temperature at any intermediate plane is proportional to its position relative to the surfaces, and for this case unidirectional heat flow exists. The direction is normal to the isothermal planes, as this is the path of least resistance.

For steady state heat condition, a zone (with its center at point 1 in the cross section depicted by Fig. 1) must lose the same quantity of heat as it receives. By considering very small zones, it is possible to accurately assume that the heat received — or lost — is conducted from the surrounding regions along the four directional lines passing through point 1. Obviously, the assumption becomes increasingly accurate as the area of the zone considered decreases. The region to be considered is bounded by *A*, *B*, *C*, and *D*, with its center at point 1 in Fig. 1. By dividing the cross section into a square grid, the zone *A-B-C-D* is also a square surface and the area through which heat may enter or leave is four times the product of a side of the section.

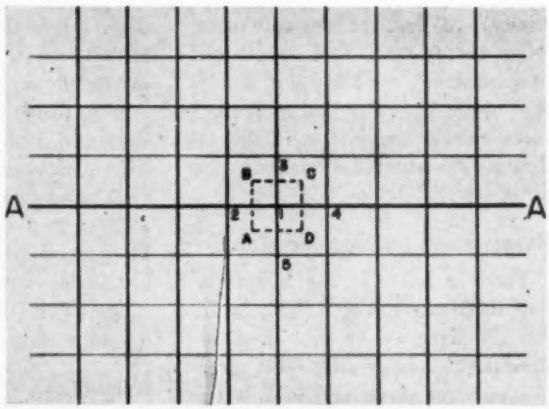


FIG. 1 — IN ANALYZING THE PROBLEM, it is possible — by considering very small zones — to assume that the heat received or lost is conducted from the surrounding regions along the four directional lines passing through point 1

Temperature Distribution and Heat Loss

The rate of heat transfer through a conductor can be determined from

Dr. Baker is an associate professor of mechanical engineering at the University of Kentucky, Mr. O'Byrne is an instructor in mechanical engineering, and Mr. Levy is a graduate assistant in mechanical engineering.

the temperature distribution, its thermal conductivity and surface area. The most general method is probably that of formulating the "map" consisting of the isothermal and flow path lines. The flow path lines are drawn perpendicular to the isothermal curves and positioned such that a space with approximately equal sides, curvilinear square, results. Fig. 2 shows the map for a cross section taken through the soil adjacent to a slab floor. It is evident that most of the loss occurs within the section nearest the wall, and very little heat is lost to the earth under the central part of the floor.

The thermal conductivities of soils vary appreciably with the type of soil and the moisture content. As a prolonged cold period may prevail when the soil is wet, a design value of 1 Btu per hr per ft per F is recommended for the thermal conductivity of soils. However, when reliable data are available for a particular soil, these values should be used in preference to factors obtained from any other source.

HOW TO FIGURE THE HEAT LOSS

The "relaxation method" discussed in this article may be applied to evaluate the design heat loss through slab floors and from basements.

The maximum anticipated heat loss from a floor slab is primarily dependent on the floor perimeter, the thermal conductivity of the soil, the outside soil surface design temperature and the inside surface temperature. For a large uninsulated floor located in a moderately cold climate, the design heat loss is given by:

$$q = 55.4\ k\ L$$

The design heat loss (below the ground surface) from a 7 ft deep basement having uninsulated walls and floor and located in a moderately cold climate is given by:

$$q = 135\ k\ L$$

In these equations, q is the heat loss, Btu per hr; k is the thermal conductivity, Btu per hr per ft per F, and L is the perimeter length, ft.

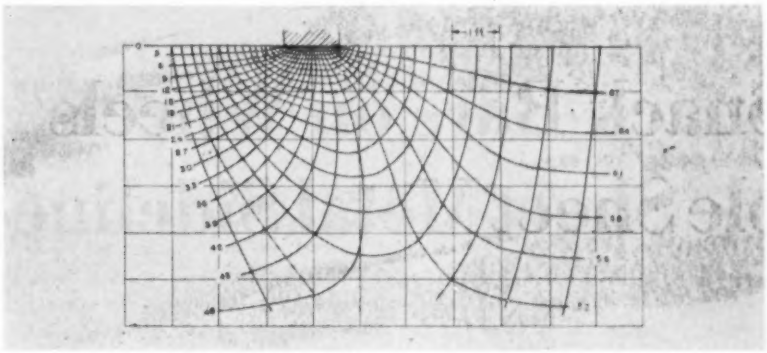


FIG. 2 — APPROXIMATE HEAT FLOW lines and their intensity through the soil beneath a slab floor

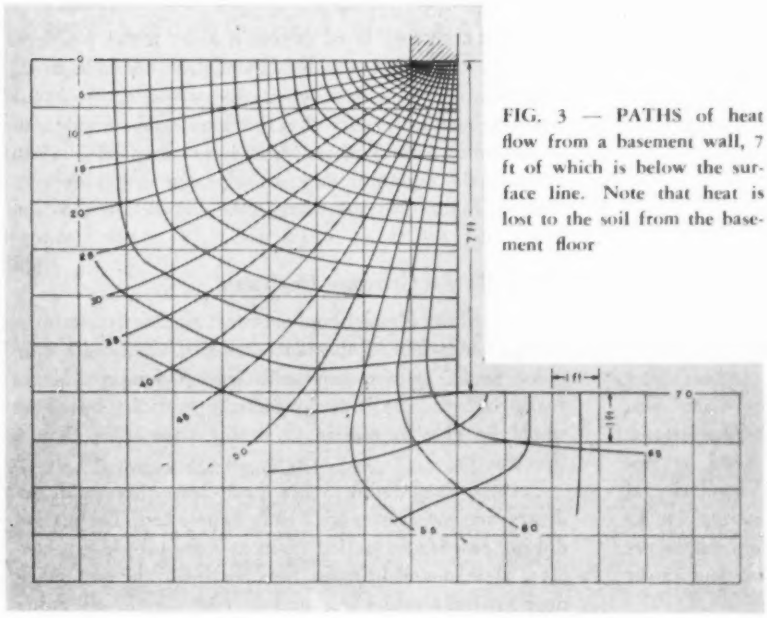


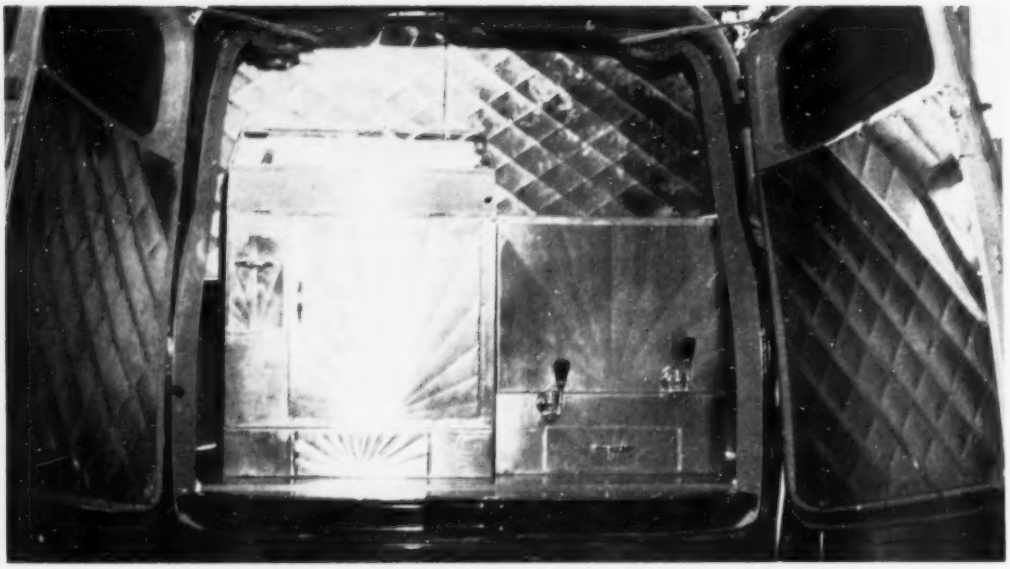
FIG. 3 — PATHS of heat flow from a basement wall, 7 ft of which is below the surface line. Note that heat is lost to the soil from the basement floor

Fig. 3 depicts the map of a cross section of a basement wall and floor. The heat flow lines and their intensity were obtained from calculations based on experiments at the University of Kentucky.

Discussion of the Results

R. S. Dill, W. C. Robinson and H. E. Robinson have reported [Building Materials and Structures, National Bureau of Standards, Report BMS103, March 10, 1945] on the basis of experimental data that the heat loss from slab floors depends primarily on the floor perimeter rather than the surface area. For a 4 in. concrete floor over gravel, they reported a loss of 0.81 Btu per hr per ft per F temperature difference between inside and outside air. This value was obtained as an average over a period, and agrees with a figure of 0.795 determined by the tests at the University of Kentucky. The favorable comparison between calculated results and experimental values strengthens the equations presented in this analysis.

The method discussed here offers a generalized solution in that it can be applied to all geometric shapes. For insulated walls or floors or construction materials having thermal properties different than the adjacent soil, the wall or floor may be expressed as an equivalent thickness of the soil. The solution may then proceed in the manner presented.



OVEN AND URN have been anchored in place at the rear of this truck. Note stainless steel "upholstery" on doors

Outfitting "Snack Bars on Wheels" —A Profitable Sheet Metal Sideline

By Robert F. Welch

Mobile restaurants that serve snacks and lunches to employees in plants and shops have been steadily growing in popularity. Outfitting these snack bars with standard and special stainless steel equipment is a profitable sideline for any sheet metal shop. Work can be done at the shop, and during slow seasons, standard fixtures can be fabricated for later use

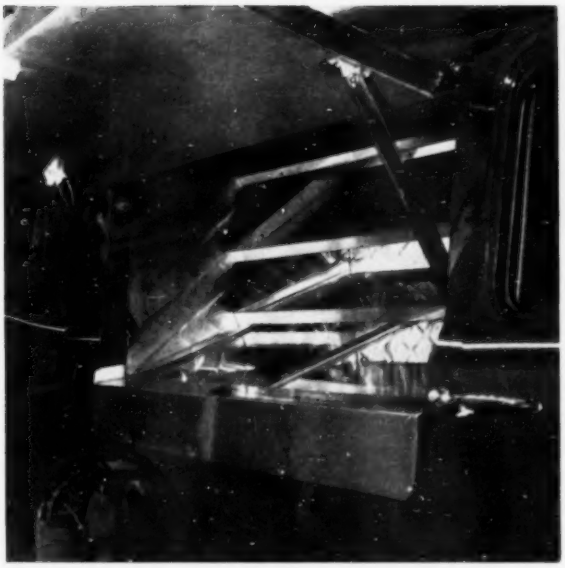
WHILE MANY sheet metal contractors have long specialized in restaurant work, few recognize the money making possibilities in a relatively new system of food servicing which has grown by leaps and bounds since World War II. LeRoy Wyss of Roy's Sheet Metal Works, Inglewood, Calif., decided to take advantage of a trend he saw developing six years ago — the growing popularity of "snack bars on wheels". These are catering trucks specifically designed to serve plant and shop employees as mobile restaurants during mid-morning snacks or noon lunch.

Truck outfitting is of course a sheet metal problem. In many cases the operators themselves are able to do a portion of the work necessary to convert a vehicle for catering, but invariably they need a certain amount of professional help. When a sheet metal shop offers them specialized assistance, they often realize it's more economical to have experts handle the complete conversion job.

Snack Bars a Growing Business

Roy's Sheet Metal Shop outfitted its first truck for a caterer in 1946. At that time most of the trucks were older models which had seen service during the war years. There was little to indicate that the operators would be able to remain in business for more than a few months.

Yet the intervening years have seen this small industry become even more firmly entrenched. The market did not reach a saturation point as some people expected it to. The idea of bringing food service to the customer's door proved a sound one, and the company is still doing



DISPLAY CASE is built into the side of panel delivery truck. Stainless steel is used for all such fixtures



THIS LARGE URN, fabricated at the shop, has two compartments, one for coffee and the other for hot water

work for many of its original customers. As their units become worn out they are replaced with newer and better ones. What started out to be a small sideline has developed into a major function, accounting for 50 per cent of the firm's business volume.

Roy's Sheet Metal Works will probably outfit 150 catering trucks this year. Prices for these jobs fluctuate widely, depending upon the type of installation. Most of them average between $500 and $1000.

Almost all the jobs are custom designed to the operator's specifications. Approximately 95 per cent of the vehicles are panel delivery trucks, although there are a few pickups in use.

Variety of Standard Equipment Installed

A door is cut horizontally in the side of the truck and hinged so it may be lifted to show a display counter. Such merchandise as candy, cigarettes, and cold sandwiches is placed here. Frequently there is a glass-covered compartment for doughnuts and baked goods. The shop always uses stainless steel in fabrication of display fixtures. Galvanized iron is employed for the floor.

Other standard equipment includes ovens, for keeping sandwiches warm, and coffee urns. Heat is required for these units, as well as for the popular tamale cans carried by most trucks. Butane, white gas, and charcoal have all been used as fuel.

Trucks Tailored for Special Uses

The fuel problem is complicated by the fact that no two routes are exactly similar. One driver who has a series of short stops wants a quick fuel, while another may be interested in capacity, not speed.

The shop recently installed a butane tank in a new truck which is a good example of the variety of work done. This job took two men nearly three days to complete, and cost the customer about $1200. In addition to regular equipment, a large two-compartment urn for both coffee and hot water was installed. Doors were covered with stainless steel, and light fixtures were put in because the vehicle operates on two shifts in making stops at large industrial plants.

The overall layout usually conforms to well established standards which have been developed as best suited to the method of operation. Self-service is the general rule. In order to discourage pilferage, the driver wants to have everything in full view while he is making change. Only one side and the rear of the truck are used for customer service.

The soft drink tray for keeping pop cold may be placed either at the right of the driver's seat or in the back of the truck. Coffee urns may also be alternated between these two positions. The coffee and pop are usually separated so there will be a minimum of congestion while customers are waiting on themselves.

Every possible cubic inch of space must be effectively utilized. There's barely enough room for the driver to get under the wheel, most space being given over to storage or display. The shop is frequently called on to cut a service door into the body on the driver's side so that he will have easy accessibility to reserve stock.

Truck Outfitting Offers Advantages

From the sheet metal contractor's point of view, one of the big advantages in a catering truck specialty is the fact that work can be done right at the shop. He has the use of all equipment and tools on the premises. This holds his costs to a minimum.



OFFICERS OF the association who were present at the convention are: *(l. to r.)* E. P. Hayes; C. S. Franke; Sheldon Coleman; C. B. Phillips; W. D. Redrup; F. H. Adams (guest speaker); G. W. Denges; H. G. Cross; F. L. Meyer; L. S. Redford; M. I. Levy; and H. F. Curtis

New Approaches to Warm Air Heating

. . . were discussed at the recent annual convention of the National Warm Air Heating and Air Conditioning Association. The Short Course Program for 1953 was announced

THE COORDINATION of educational programs by manufacturers, wholesalers and dealers will result in a greater public interest in the warm air heating industry. More people will participate in the industry's activities and the practice of selling an installation on price alone will be replaced by selling based upon the quality of the equipment and satisfaction with the comfort that warm air heating can provide. To bring this about, there must be a common goal toward which all divisions of the industry must direct their energies. Sales and advertising policies should be altered so that the comfort theme can be carried by each group to those with whom it comes in contact.

The recent annual convention of the National Warm Air Heating and Air Conditioning Association held in Cincinnati, Dec. 3 to 4, was highlighted with speeches that stressed this important objective. Fred R. Green, president, Des Moines Furnace and Stove Repair Co., and president, National Heating Wholesalers Association, stated that a new approach was needed to solve the mutual problems of the dealer, wholesaler and manufacturer. As wholesalers do business with both manufacturers and dealers, they can see how the actions of one affect the other. It is true that many problems arise that are specific problems of each individual division of the industry, or of an individual company. But first we should deal only with problems that concern the warm air heating industry as a whole, he said.

Should Provide Satisfaction and Economy

Mr. Green quoted the common goal of the National Warm Air Heating and Air Conditioning Association as "that every user of a warm air heating system will receive from that system the most satisfaction and economy of operation". He continued, "What could be more worthwhile? Let us hope that the greater part of our industry will accept this goal and continue to strive toward it, regardless of the problems encountered. This ultimate goal — satisfaction of the user — is one we can all agree on because only by that goal can our industry survive competition.

"What gives rise to our mutual problems? Our warm air heating industry, like every industry that continues to go forward, has in the past experienced many changes.

"The largest change is, of course, in volume of business, but also there have been changes in types of fuel, changes in design for better efficiency, changes in distribution, and last but not least, changes in merchandising.

A New Approach Needed

"Let us all stop 'passing the buck', and make up our minds right now that we are all going to sit down and go to work together. Let us look at the changes that have occurred in our industry and consider the problems they bring to us:

1. *Volume Change*

"Our industry records, though incomplete, indicate that approximately 90,000 warm air furnaces were installed back in 1900. Recently the annual installations have been numbered at one million units. This is an increase in volume of 10 times and if we were still installing the same types of jobs as we installed in 1900, it would mean that we would need over 10 times as



FANS AND BLOWERS came in for their share of attention in this conversation between *(l. to r.)* Homer Brundage, Bruce McLouth, and Richard Judd



FROM FAR-AWAY PLACES came *(l. to r.)* G. D. Montag of Oregon and J. F. Deane of California

many installers as were available at that time. We haven't got them, and that of course is a definite problem of our industry.

2. *Fuel and Type Changes*

"Manpower is only a part of the problem. In the 1900's all we had were gravity, coal-fired furnaces. Now we have many more types and many more fuels. As you know, the larger proportion of units installed today are oil-fired and gas-fired furnaces. Technical knowledge of our product is an additional problem.

"The gradual changeover from gravity coal-fired furnaces to automatic fired, forced warm air units, has brought a tremendous change since 1945, the last year of the war. That year, 83 per cent of all units installed were coal fired, 12 per cent gas fired and 5 per cent oil fired. 1946 ushered in an era in our industry for which we were unprepared, and for which we are still perhaps unprepared.

"In 1950 when more than one million furnace units were installed, there were only 12 per cent coal fired warm air furnaces installed, compared to 55 per cent gas and 33 per cent oil.

Suggested Solutions for Problems

1. *Educated Manpower*

"The change in the type of units installed, therefore, creates a much more different problem than just that of more manpower. That problem is one of more *educated* manpower. It is a primary problem of the industry as a whole to see that there are not only more men available to the industry to take care of increased volume, but they must be educated, to take care of the changes in the types of units installed. Educational programs starting with the grade school, going right through the educational system up to and including the trade schools, should certainly be in order.

"Your association can, and should, take a definite part in that program, but certainly cannot do it alone. Your association needs your help, whether you are a manufacturer, wholesaler or dealer.

"As a part of the industry, it is up to the dealer to do his share as well as the others. Shouldn't the dealer encourage people in his community to become a part of his industry? We often hear dealers say that they are unable to obtain competent help. The dealer should make it a point to encourage people to work for him, to encourage them to learn about the industry, and to do this under the guidance of the other segments of the industry.

Warm Air No Longer "Hit or Miss"

"Forced warm air in winter air conditioning units has changed the type of job that we can handle, and that change has brought us a problem of engineering and that once again is education — education by our industry so that we are better able to engineer these jobs; in so doing we increase the scope of our operations.

"Where we could heat only the average residence a few years ago, there now seems to be no limit to the use of forced warm air heating. However, we cannot install those jobs in the same manner as we did many years ago, in the old gravity days. It was "hit or miss" then; once in a while you had a complaint that this or that room did not heat or that the furnace was too small, but those complaints were few and far between, even though these installations were made by people who knew little or nothing about the heating needs of a home, church, or store building.

Must Have Adequate Stocks

"Let us consider the change in volume, and the distribution problems resulting from this change. Perhaps some people wouldn't define distribution as I will here, but I would like to consider it merely the process of getting to the trade the merchandise that the trade requires. Not too many years ago, four to six different types and styles of furnace units gave one a complete stock. The warehousing and distribution problem at that time was an easy one to solve, and the manufacturer in a far distant part of the country had no difficulty taking care of the needs of his accounts. Today, hardly any warm air furnace manufacturer of conse-



SMALL PIPE SYSTEMS were discussed by this large group: *(l. to r.)* C. L. Grandstaff, G. D. Montag, George Boeddener, J. F. Deane, Guy A. Voorhees, and C. W. Nessell



ENJOYING GOOD FOOD and good fellowship: *(l. to r.)* R. H. Budde, Dee Cramer, and Joe Wilder

quence has less than 40 to 60 different types, sizes and styles of units.

"With these changes we have realized that there must be a definite change in our thinking regarding distribution. This thinking must be based on one very special concept — that if we don't have what our customer needs he will go elsewhere.

"This problem of warehousing cannot be just a specific problem of the manufacturer, or the wholesaler, or the dealer. It is the combined problem of all three.

Distribution Important Problem for Dealer

"A few years ago the dealer wasn't too concerned with the distribution system; he would carry one or two different sizes of furnaces in stock, and he could afford to do this. He carried a few bundles of sheets and he made most of his fittings. He also carried a few gravity warm air registers, and a supply of wood return-air face that he could cut to any size, and he was in business. Today it's an exception to find a dealer or installer who can afford to carry all the items needed for the jobs sold during the year. He is far more dependent upon this distribution system today than he was before. He doesn't know whether he will need a basement forced warm air unit, a highboy, a counter-flow unit, whether his next job will be a small bungalow requiring 70,000 Btu input or a larger job needing double that. In many localities he doesn't know whether he will be selling an oil furnace, a furnace for use with natural gas, or a unit for LP gas. When that next job comes along he must have this equipment available and readily so.

"The dealer or installer must have quickly available what he needs in a heating unit. In addition, due to the fact that today many more dealers buy their furnace pipe and fittings, the dealer must have those items readily available in a warehouse close by, and at the same time the many other sundry things needed for the proper installation of warm air heating systems today. Yes, indeed, one of the very important problems of our entire industry is that of distribution; there must be adequate stocks of all required items easily accessible at all times.

Better Selling Needed

"Changes in our industry have brought about many changes and problems in selling. Selling effort may, of course, be broken down into a number of different phases. First of all, we might mention 'effort' or direct hard work. There is no substitute for hard work, but hard work without knowledge is wasted work. Therefore, you tie selling right back into your educational program and that is once again a mutual problem of our industry as a whole.

"There are many phases of education in selling that treat problems of the individual — for example, a course on selling that deals with the psychology of selling by correcting the many shortcomings of the average person, the chap who is easily discouraged, or who couldn't work out his plans, or who lacks enthusiasm or confidence.

"There is a course in selling that deals specifically with heating. It is 'Seven Steps to Greater Dealer Sales', made available by the Minneapolis-Honeywell Regulator Co. The course itself is pointed directly at the dealer, but is worthwhile for every other manufacturer and for every wholesaler in the heating industry.

"The problems of product knowledge, engineering knowledge, and service knowledge all come under the category of selling. If our industry is going to continue its progress, all of us must know more about the merchandise that we sell.

New Approach Recommended

"My first suggestion is that the National Warm Air Heating and Air Conditioning Association concentrate mainly on the technical education of the industry along the lines of those studies carried on at the University of Illinois, those studies being the basic principles and methods of warm air heating and only mild emphasis being placed on the service and the sales of warm air heating equipment.

"Let the manufacturers continue their educational pro-

grams, in cooperation with wholesalers and dealers, but let these educational programs deal more specifically with the definite engineering and sales problems of their own products, dealing only mildly with heating engineering as studied at Urbana.

"Let the wholesalers hold service and sales schools. Some wholesalers don't agree with this thought, but more and more are coming to realize that if they are to hold their place in the industry, they must become a part of the educational program."

Speaks on Building Future Business

Jack Stowell, a prominent dealer from Aurora, Illinois, spoke on the aspects to be considered at the dealer level in the building of future business. He stressed the importance of proper bookkeeping and accounting and pointed out that too many dealers were losing money due to inadequate methods. He also mentioned the other phases of building a substantial business, such as shop and showroom appearance, personal contact work, dealer level advertising and promotional efforts, training of personnel and establishing dealer reputation through conscientious customer service. He also stated that dealers must realize the obligation they have to serve the consumer honestly and thereby help in promoting his business as well as the warm air heating industry.

Frank H. Adams, president of the Surface Combustion Corp., spoke on the subject of *Where Does Our Industry Go From Here?* "Where we go", stated Mr. Adams, "depends on how we as individual members of this Association use our inheritance and assets.'" He added that a made-to-order market has been placed in the lap of the warm air heating industry. He stressed the wonderful opportunity that exists for a dealer to build a solid reputation for superior results by selling the fundamental qualities of warm air heating, and by using the information and sales tools which have been so generously placed in his hands by manufacturers and the association. Mr. Adams believes that the responsibility for finding and training a force to do creative selling for the industry rests with all — manufacturer, distributor, jobber and heating contractor. Each should work to see that the stigma of "cheapness" is removed from warm air heating and public acceptance based on the quality of our equipment and the quality of its application. Only through our sales and advertising policies can this be obtained.

He went on to mention the point that although new housing volume showed a decline, builders are planning to merchandise their homes, and a high quality heating plant will become an essential asset.

Fred Smith, vice president of the Wm. Powell Co., Cincinnati, spoke on the subject, *Sales Personality, Its Importance and Development.* Mr. Smith covered the aspect of principles *vs.* techniques and discussed the two methods of teaching; one being imitation, the other individual development. He also gave several examples of sales personalities in various fields of business today. He went on to state his belief that salesmanship is security and concluded by giving common denominators of great salesmen.

Survey on Small Pipe Systems

The results of a small pipe system survey were presented by D. Paul Bailey, Director of Market Research, Iron Fireman Mfg. Co.

Questionnaires were sent to 2,127 dealers in the hope of establishing some definite reaction regarding small pipe systems. The return of 45 per cent represents a much higher response than is generally considered possible from a survey of this nature, and indicates the desire of dealers to express their opinions on the small pipe system. "It is our intention not to formulate any definite conclusions about the system but rather to look into the various aspects of it and find out dealers' reactions," stated Mr. Bailey.

To determine whether dealers feel that the small pipe system is an acceptable warm air system, the question "Is it a good deal?" was asked with the following response: out of 928 replies, 44 per cent indicated that the small pipe system is a good deal, 9 per cent said "No", 39 per cent did not wish to commit themselves at the time they completed the questionnaire and 8 per cent did not answer.

Another question asked whether or not dealers felt the small pipe system provides more comfort than conventional forced air systems. Out of 928 replies, 32 per cent answered "Yes", 14 per cent answered "No", 29 per cent answered "Don't know" and 25 per cent did not answer.

There was a fairly even distribution in the dealers' thinking as to whether small pipe systems are limited to homes of a particular price range. Although the majority (45 per cent) stated that they felt that the small pipe system was limited to homes of a particular cost, a surprising number of dealers (30 per cent) stated that they felt there was no limitation. 15 per cent withheld a decision, and 10 per cent of the dealers did not know. Of the 45 per cent of dealers who believe the installation of a small pipe system is limited to homes of a particular price range, 36 per cent felt it is limited to houses under $8,500, 49 per cent to houses under $12,500, 12 per cent to houses under $20,000 and 3 per cent to houses under $28,000.

Question Dealers on Pipe and Fittings Supply

One of the final questions asked pertained to pipe and fittings supply. For each dealer who indicated a desire to obtain his pipe and fittings packaged with the furnaces, seven dealers reported a desire to obtain his pipe and fittings from their regular supplier. Other dealers reported a desire to fabricate their own pipe.

Under the guidance of M. I. Levy, Chairman of the Publicity and Merchandising Committee, an interesting skit was presented that illustrated how publicity had helped promote warm air heating by building consumer interest through trade publications, newspaper releases and builder and architectural magazines. With the use

of props the members of the cast displayed the various methods for promoting consumer acceptance of warm air heating. Members of the cast were: L. S. Redford, Jackson & Church Co., J. E. Phillips, Stelwagon Mfg. Co., V. Heinis, Rheem Mfg. Co., I. E. Seith, Forest City Foundries Co., H. C. Gurney, Surface Combustion Corp.

During the business session, officers and members of the Board of Trustees were nominated and elected. The following officers were re-elected: W. D. Redrup, The Majestic Co., president; C. B. Phillips, Surface Combustion Corp., first vice president; G. W. Denges, Williamson Heater Co., second vice president; Geo. Boeddener, managing director and secretary-treasurer; and C. S. Franke, American Furnace Co., ex-officio.

Elected to replace retiring members of the Board of Trustees were: H. M. Carnahan, American Radiator and Standard Sanitary Corp.; F. J. Nunlist, L. J. Mueller Furnace Co.; and C. J. Pearson, U. S. Register Co. T. I. Byrd, Lau Blower Co., was reelected for an additional term of office. Other members of the board are: S. Coleman, Coleman Co., Inc.; R. M. Cook, Thatcher Furnace Co.; H. G. Cross, Waterman-Waterbury Co.; L. C. Harvey, Affiliated Gas Equipment, Inc.; E. P. Hayes, C. A. Olsen Mfg. Co.; M. I. Levy, Viking Air Conditioning Corp.; J. W. Norris, Lennox Furnace Co.; and L. S. Redford, Jackson & Church Co.

Typical Short Course Program

Bruce F. McLouth, chairman of the Short Course Committee, presented the following typical program for a short course session:

FIRST DAY
Registration and Welcome Address
Lecture: *ABC's of Warm Air Heating*
Lecture: *Why Engineering?*
Lunch
Lecture: *Burning of Fuels*
Three hour classroom instruction
Dinner
Lecture: *Small Pipe Systems*

SECOND DAY
Lecture: *Heating Slab Floor Residences*
Three hour classroom instruction
Lunch
Lecture: *Benefits of C.A.C.*
Three hour classroom instruction
Dinner and Special Program

THIRD DAY
Lecture: *Combination Heating and Cooling Systems*
Three hour classroom instruction
Lunch
Lecture: *Chimney Flues and Combustion Air Supply*
Three hour classroom instruction
Banquet
Entertainment — Special Speaker

LAST DAY
Lecture: *Converting Gravity Systems to F.A.*
Three hour classroom instruction
Lunch
Lecture: *Customer-Dealer Relations*
Presentation of Certificates
School Adjourns about 2:30 p.m.

This program is typical of all five schools, with the exception of a few lectures. In some cases, similar subjects were covered last year, and a change was desirable.

Design Problems Vary

Each school has chosen three or more design problems from six prepared by the Short Course Committee. These are:

1) A small four-room residence with basement and expansion in attic. An elementary problem using Manuals 1,2,3,5,7, and 10.

2) A small four-room residence without basement. The heating plant will be in a utility room. An elementary problem using Manuals 1, 2, 3 and 4.

3) A small church job with basement to be heated. An advanced problem using Manuals 3 and 9.

4) A larger home without basement. An advanced heating problem using Manuals 3 and 9.

5) An industrial problem using large warm air suspended or floor mounted heaters. Ventilation problems will be introduced. An advanced problem using Manuals 3 and 9.

6) A larger residence having a combination heating and cooling system. An advanced problem using Manuals 3 and 9 and the ASHVE Guide.

The problems offered by each school, and the dates of each are:

Oklahoma A. & M. College, Feb. 23 to 26, Nos. 3, 4 and 6
Iowa State College, March 23 to 26, Nos. 1, 2, 3 and 5
Michigan State College, March 30 to April 2, Nos. 1, 2, 4 and 5
Penn State College, April 1 to 4, Nos. 1, 2, 4 and 5
Purdue University, April 14 to 17, Nos. 1, 2, 5 and 6

Each student will have a choice of the problems given at the school of his selection. The staggered dates are intended to permit one person to attend more than one short course.

Everyone connected with the heating industry in any capacity is eligible to attend the conferences. A charge of $20.00 is made at each school.

Continue Field Tests on Fuel Oils with Additive

THE STABILITY OF home heating oils has been increased, sludging has been reduced to a negligible amount, and an important cause of lessened efficiency in oil burners has been removed by means of an additive used for two years in field tests of domestic heating oil.

Studies to develop a suitable additive were begun as long ago as 1945 by the Gulf Oil Co. when it sought to overcome the tendency of modern fuel to form sediment while in storage. The problem was incurred during the war years when the catalytic cracking process was adopted by the refineries and was diagnosed as resulting from a lack of stability in the fuel. The cause of instability was obscure since the fuel is a combination of two fuels, each relatively stable by itself. However, it was recognized that this lack of stability, which resulted when catalytically cracked and straight-run fuels were combined, would have to be corrected to insure the most satisfactory performance.

Since compounds that were attractive in the laboratory had failed in the field, the present additive was given severe testing. For two years a selected group of home owners in Boston and Toledo cooperated in field tests using the test oils in furnaces heating their own homes. More than 100 persons participated in this carefully controlled program, their furnaces being inspected at 60 day intervals.



HERE is one of last year's conferences. New information is presented each year

Schedule 1953 Indoor Comfort Conferences

. . . which this year will include information on summer cooling as well as various aspects of warm air perimeter heating. Conferences are sponsored by the National Warm Air Heating and Air Conditioning Association



THE CONFERENCES will be conducted again this year by Guy A. Voorhees, who has instructed the 150 conferences held during the past six years

THE TWO-DAY Indoor Comfort Conferences for 1953 have now been scheduled through March by the National Warm Air Heating and Air Conditioning Association.

This year information on summer cooling is being included in the program. Those who attend will hear recommendations on how to install summer air conditioning systems in new homes and how to add them to present warm air heating systems.

On the first morning, the discussion covers methods for figuring heat loss for homes built over a crawl space, (using the revised edition of Manual No. 3 and Worksheet 43).

On the afternoon of the first day, subjects discussed include fundamentals of perimeter heating, where warm air is introduced along outside walls through perimeter floor diffusers, wall diffusers, or baseboard diffusers; how to design a small pipe warm air perimeter heating system for homes built over a crawl space (using house plans on which heat loss was figured, and using as a basis for design information Manual No. 10); and how to design a small pipe warm air perimeter heating system for homes with basements.

The second morning covers the design of a warm air perimeter heating system for homes constructed on concrete slabs (using Manual No. 4 and Worksheets 41A and 42); and a comparison of perimeter loop and perimeter radial systems.

Information on the fundamentals of summer air conditioning will be presented at the last session.

Schedule Through March

The locations, dates, and chairmen for the forthcoming conferences are:

Fond du Lac, Wis., Jan. 15 to 16, E. J. MacIntyre, The MacIntyre Co., Inc., 400 Marquette St.

Minneapolis, Jan. 19 to 20, T. J. Delaney, The Waterman-Waterbury Co., 1121 Jackson St., N.E.

Lewisburg, Pa., Feb. 2 to 3, W. J. Busser, Jr., Busser Supply Co.

Boston, Feb. 9 to 10, Dick Hudson, Herrick Co., 352 "C" St., South Boston.

Long Island, N.Y., Feb. 12 to 13, Malcolm McLean, Bryant Heater Div., 957 Saw Mill River Rd., Yonkers 2, N.Y.

Philadelphia, Feb. 16 to 17, Martin Corbman, Adelta Mfg. Co., Inc., 21st and Ellsworth St.

Baltimore, Feb. 19 to 20, B. J. Newark, Wm. E. Kingswell, Inc., 1700 Friendship.

Knoxville, March 2 to 3, Clarence McCampbell, Tennessee Mill & Mine Supply Co., 410 State St.

Atlanta, March 5 to 6, S. C. Floersheim, Warm Air Heating Contractors Assn. of Atlanta, 512 W. Peachtree.

Charlotte, March 9 to 10, Bruce O. Leister, Metal Service Corp., 2510 Lucena.

Evansville, Ind., March 13 to 14, Bernard J. Kneer, Ohio Valley Hardware & Rfg. Co.

Peoria, Ill., March 18 to 19, Charles Raper, The Meyer Furnace Co., P.O. Box 989.

Little Rock, March 30 to 31, J. L. Brown, Manufacturers Sales Agent, Terminal Warehouse Bldg.

What's Energy Consumption of Residential Heat Pumps?

. . . by the heat loss and degree day methods. The contractor selling a heat pump installation will usually have to answer the question, "How much will it cost to operate?" The authors offer him a way to find the answer

S. L. Pappas and F. R. O'Brien
Southern Research Institute

RESULTS FROM a recent survey* of electric heat pump installations in the Southeast indicate that the heat pump is here to stay. This is evidenced by the ever-increasing number of installations and the increasing number of manufacturers.

The initial cost is the greatest obstacle in selling a heat pump today. However, there are many inherent advantages that will make the heat pump competitive with other forms of heating and cooling. Some of the advantages are: (1) The function of heating and cooling is accomplished by one mechanism (instead of two separate mechanisms), which conserves space and allows for an all-electric home; (2) more economical operation is possible, due to the relatively stable electric rates.

Questions on operating costs nearly always come up when the heat pump is discussed. People ask, "What will it cost to operate? Can I recover part of the high initial cost out of cheaper operation?" Before these questions can be answered properly, a reliable method of estimating the probable energy consumption of a heat pump in a particular residence is required.

This paper will restrict its discussion to residential heat pump installations, since commercial installations have different operating characteristics due to size, more limited operation (used during work days only), etc. Thus, some of the assumptions in the foregoing analysis will not apply to commercial installations.

Heat Loss Method Applied to Heat Pump

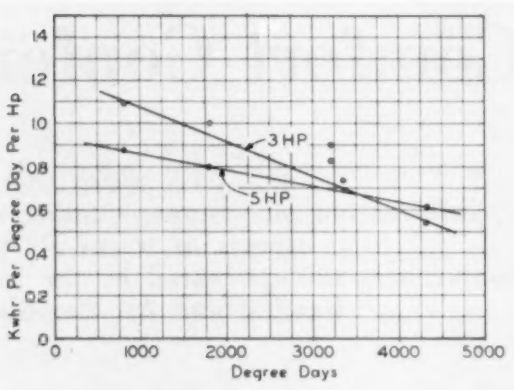
At present, there are two different methods of estimating energy or fuel consumption of any heating plant. One method is the heat loss method, and the other is the degree day method. The heat loss method is based on the following equation (from the ASHVE Guide):

$$E = [H\ (t - t_o)\ N]/[E\ (t_d - t_o)\ C] \quad \ldots\ldots\ldots\ldots (1)$$

Where

E = energy or fuel consumption
H = calculated heat loss in Btu per hr based on t_o

*An "on the spot" survey of approximately 125 heat pump installations was made during 1951 for Southern Services, Inc., of Birmingham, Alabama.



THE INCREASE in Kwhr per deg day per hp as the heating requirements decrease is caused by an increase in the short cycling operation experienced during mild weather. Therefore, one constant value of U cannot be used for any size heat pump in any locality

t = average inside temperature during heating period
t_o = average outside temperature during heating period
t_d = inside design temperature, F deg
t_o = outside design temperature, F deg
N = number of heating hours in estimated period
E = efficiency of utilization of fuel over the estimated heating period
C = heating value of one unit of fuel

In order that this equation may be applied to the heat pump, a seasonal performance factor must be assumed for each installation and substituted for the efficiency, E, in the above equation. The C value for a heat pump will be the heat equivalent of a Kwhr, or 3413 Btu. The other terms in the equation can be used in the same manner as for any other heating system. Special care should be taken, however, in selecting the length of the heating season (which determines N in above equation) for the various localities. This equation may be applied to any heat pump regardless of the type of heat source used.

Degree Day Method Modified to Suit

The degree day method of estimating the fuel or en-

ergy consumption of a heating plant is based on the following equation (from the ASHVE Guide):

$$E = U\,N\,D \quad \ldots\ldots (2)$$

Where

E = energy or fuel consumption
U = unit fuel consumption or quantity of fuel used per degree day, per building load unit.
N = number of building load units (based on calculated hourly heat loss or sq ft of radiation, etc.)
D = number of degree days for heating season

The difficulty in applying this equation to heat pump operation is the determination of the U value, since it is not given for the electric heat pump as it is for oil, coal, and gas heating plants. Thus, some test data are required to determine the U value for an electric heat pump before this equation may be applied.

If we rewrite the above degree day Equation 2 in another form that is more applicable to the heat pump, it will appear as follows:

$$E = U\,D\,P \quad \ldots\ldots (3)$$

Where

E = Kwhr energy consumption of heat pump
U = Kwhr per deg day per hp or Kw
P = connected hp or Kw
D = degree days for period

U Values Vary with Locality

In a recent survey of over 100 heat pump installations in the Southeast, a factor similar to U in Equation 3 (since its units were Kwhr per deg day per hp) was determined (from average energy consumption data accumulated on these units) for the 3 hp and 5 hp units in each locality and plotted against the average degree day heating requirements for the locality as seen in the graph. It is seen from this plot that this factor decreased at a fairly constant rate with an increase in the degree day heating requirements. This indicates that the heat pump operates more efficiently as the heating requirements increase. It appears that the increase in this factor as the heating requirements decrease is caused by an increase in the short cycling operation that is experienced during mild weather conditions. Short cycling or transient operation is an inefficient type of operation and has a low performance factor since the operation is over a short interval of time. Thus, it appears that it will not be advisable to use one constant value of U for any size heat pump situated in any locality. The 3 hp, 5 hp, etc., heat pumps will have different U values that will vary from locality to locality.

If we further analyze Equation 3 above and limit our analysis, for the present, to a number of identically sized heat pumps installed in different houses in the same locality, it is obvious that Equation 3 will show that the energy consumed during the heating season for each house will be equal to the others if U is constant for the locality (since D and P will have to be constant under these conditions). It is assumed that each of the houses maintains the same temperature during the heating season and each has the same heat source temperature. It is obvious from this example that the only way that this could be true is for the houses to have the same design heating load. This is very seldom the case and a correction factor must be applied to Equation 3 to allow for undersize or oversize of the heat pump. This factor will correct the U value of a locality for each particular installation. Equation 3 may now be rewritten as follows:

$$E = U\,D\,P\,f \quad \ldots\ldots (4)$$

Where

f = Design Heating Load (Btu per hr)/Rated Output of Heat Pump (Btu per hr)

Thus, when

$f < 1$, heat pump is oversized
$f = 1$, heat pump is exactly sized
$f > 1$, heat pump is undersized

From this equation, it is obvious that the U value as applied to Equations 2 and 3 is not constant unless the correction factor f is applied.

U Value Constant for Particular Locality

The following analysis is provided as proof that the U value as applied in Equation 4 is constant for a particular locality. First, let us consider that there are three houses in a locality with identically sized heat pumps installed in each, but with different design heating loads. Assume also that the heat source temperature of each heat pump is the same and remains constant throughout the heating season. Assume that the houses have the following design heating loads at 10 F outside air temperature:

House No. 1 — 33,000 Btu per hr
House No. 2 — 42,000 Btu per hr
House No. 3 — 64,000 Btu per hr

Assume also that the rated output of the heat pump is 50,000 Btu per hr, and that the thermostat setting and room temperature in each house are the same. Making this analysis on a one-hour basis during which the outside air temperature is 25 F and the inside air temperature is 70 F for the full hour, the heating requirements of each house for the hour will be as follows:

House No. 1 — [(45)/(60)] (33,000) = 24,800 Btu per hr
House No. 2 — [(45)/(60)] (42,000) = 31,500 Btu per hr
House No. 3 — [(45)/(60)] (64,000) = 48,000 Btu per hr

The length of time the heat pump will operate in each house during this period will be as follows:

House No. 1 — T_1 = (24,800/50,000) = 0.496 hr
House No. 2 — T_2 = (31,500/50,000) = 0.63 hr
House No. 3 — T_3 = (48,000/50,000) = 0.96 hr

Energy Consumption Related to Operating Time

A relationship can be shown for any particular size heat pump operating under these conditions between

energy consumption and time of operation as follows:

$$E = K\ T$$

Where

K = Kwhr per hr
T = time of operation, hrs

K can be considered more or less constant for the same size unit except for extremely short periods of operation.

Since the weather conditions experienced by each house are identical, D is constant.

The energy consumed by each heat pump during the hour is expressed by the following equations:

House No. 1:

$$E_1 = U_1\ PD\ f_1$$

and

$$E_1 = K\ T_1$$

Thus,

$$U_1 = (K\ T_1/PD\ f_1)$$

Where

$f_1 = (33{,}000/50{,}000) = 0.66$

House No. 2:

$$E_2 = U_2\ PD\ f_2$$

and

$$E_2 = K\ T_2$$

Thus,

$$U_2 = (K\ T_2/PD\ f_2)$$

Where

$f_2 = (42{,}000/50{,}000) = 0.84$

House No. 3:

$$E_3 = U_3\ PD\ f_3$$

and

$$E_3 = K\ T_3$$

Thus,

$$U_3 = (K\ T_3/PD\ f_3)$$

Where

$f_3 = (60{,}000/50{,}000) = 1.28$

Substituting the respective values of f and T in the expressions for U from above:

$$U_1 = (K\ 0.496/D\ 0.66) = 0.75(K/PD)$$
$$U_2 = (K\ 0.63/D\ 0.84) = 0.75(K/PD)$$
$$U_3 = (K\ 0.96/D\ 1.28) = 0.75(K/PD)$$

Thus $U_1 = U_2 = U_3$ for the locality.

It should be noted that the constant U value for any locality is applicable only to heat pumps with relatively constant heat source temperatures such as well water or spring water. It is obvious at this point that the degree day equation is not readily applicable to the air-to-air heat pump because of the wide fluctuation of its heat source temperature (outside air).

Much Data Needed

Before the degree day Equation 4 can be of any practical value, the relationship between U and D (similar to that in the graph) must be found for the 3 hp, 5 hp, 7½ hp and 10 hp heat pump, from accurate energy consumption figures on heating, and accurate weather bureau data on a number of existing residential heat pump installations in localities with widely differing degree day heating requirements.

The graph shown cannot be considered reliable for use in estimating energy consumption, since the correction factor f was not applied and the data used in calculating the U values are not closely measured quantities and represent average figures.

Once these relationships are established for the various size heat pumps, the U value for any of these heat pumps in any locality (where the degree day heating requirements are within the range shown) can be determined by reading it directly from the curve of the unit. The f factor will have to be calculated for each particular installation and D will be taken from previous weather data over at least a 15 to 20 year period.

Reliability of Two Types of Equations Compared

The degree day equation will probably be just as reliable or more reliable than the heat loss equation, since it is recalled that in the latter equation the length of heating season is estimated as well as the seasonal performance factor. The performance factor is difficult to calculate since it would require complete instrumentation of the heat pump. The average degree day assumption is probably the biggest factor in the reliability of the degree day equation. The assumption of constant heat source temperature is another factor that will affect the reliability of U in the degree day equation. The variation of the heat source (which will have to be well water, spring water, etc.) temperature in the southeastern states, from Virginia to Georgia, may be from 10 to 15 deg. However, this should not cause too great an error in U. The assumption of a constant heat source temperature for a particular unit is fairly accurate since well water or spring water will usually vary no more than 5 deg, depending on the weather and the well depth.

Since the degree day equation is not applicable to the air-to-air heat pump, the heat loss method of estimating energy consumption must be applied. A seasonal performance factor must be assumed as well as the number of days in the heating season for the locality.

It is obvious that the relative accuracy of either of these methods will depend principally upon the accuracy of the assumptions made, such as length of heating season, performance factor assumed, degree day heating requirements assumed, accuracy of design heating load and the heat output of the heat pump.

Develop Model for Curtain Wall Panel

THE POPULARITY of curtain wall panels for exterior walls has brought about the development of a new 3 x 4 ft model panel of porcelain enameled steel. It is expected to be erected at a cost not to exceed $5.00 per sq ft.

The panel is insulated with 2½ in. pressed wood fiberboard (F factor 0.51) sandwiched between two sheets of 18 gage porcelain enameled steel, which are not in contact (reducing heat loss). Panels are bolted to Z-shaped steel connectors. Columns and connectors are wrapped in glass-fiber insulation and sheathed in 18 gage stainless steel. The U factor of the completed panel is 0.21.

Erection of the panel is done from the inside of the building. The panel is made watertight by the use of a continuous ⅛ in. vinyl gasket around the entire perimeter. Weight of the panel is 130 lb.



SOME OF THE air conditioning ducts are large enough for several men to crawl through at one time

Bright Metals for the White House

The newly renovated White House makes use of aluminum for air conditioning ducts, and stainless steel, which adds modern sparkle to the kitchen and many other rooms

Lawrence E. Gichner
Sheet Metal Contractor

WHEN President Eisenhower enters his residence in Washington this month he will enjoy comforts little envisioned by the original planners. In the great engineering feat of remodeling, just completed, aluminum and stainless steel played a most important part. In its 152 years, the White House has had three major renovations and undergone changes under each new administration.

The tinsmith of 1814, for instance, took pride in the installation of the first bathtub. His lineal descendant, the sheet metal worker, today takes pride in the addition of a complete air conditioning system and the brightening of previous drabness through use of modern, sparkling stainless steel.

Tons of the shiny metals were used in the reconstruction, which changed everything but the historic sandstone exterior. The entire "innards" were torn out, and rooms and baths were added so that there are now 107 rooms and 31 baths and lavatories.

There is many a run of aluminum duct in the 1,000,000 cu ft White House, ducts large enough for several men to climb through at one time, and smaller ones the diameter of a man's arm. Unfortunately little of this large job, with the exception of exhaust and return grilles, can be seen, for 99 per cent is concealed under insulation and in furred walls.

Stainless Steel Dresses Up Kitchen

Those fortunate enough to get a glimpse of the kitchen will see that stainless steel makes that room as attractive in its way as are the Green Room, the Blue Room or the formal State Dining Room.

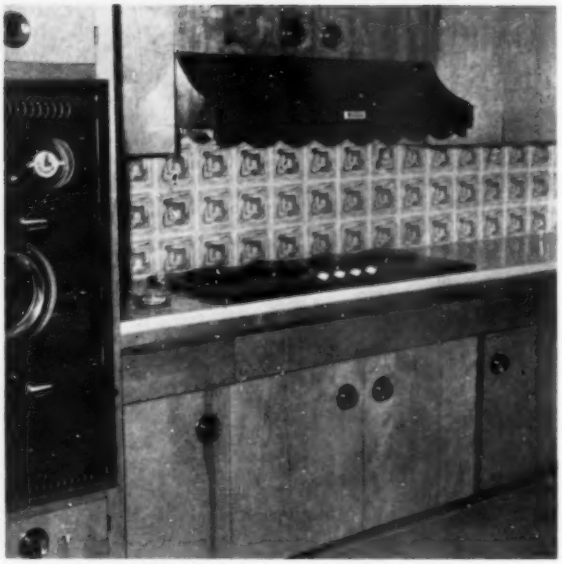
Sinks, sink tops, counter tops, range tops, table tops, splash backs and exhaust canopies are all stainless steel.

The counter tops, splash backs and sinks are built of 16 gage metal and for silence are covered underneath with a $\frac{1}{8}$ in. layer of sound deadening compound. The hoods for the kitchen range and dish washers were made of No. 20 stainless with condensation gutters that drain through a 1 in. pipe to the floor.

The kitchen range hoods are equipped with 18 x 12 x 3 in. grease filters which have stainless steel frames supporting them on stainless steel tees.



THIS CONTRACTING firm is built on the solid foundation of top quality work . . . as shown in these kitchen



ventilating hoods fabricated of cold rolled steel with a copperized finish

Contractor Stays Small But Healthy

. . . by avoiding the point of diminishing returns where further business won't bring in proportionately larger profits. However, this contractor maintains his current volume by a carefully thought out, triple-barreled business policy

"OVERHEAD COSTS and productive labor must be in harmony if a sheet metal contractor expects to maintain his profit level," says Steve Brady, sheet metal contractor, Glendale, California.

"High dollar volume has no intrinsic value. If the margin is slim, the business is insecure. And even if the margin is good there may be considerable insecurity. I know because I went broke years ago by biting off more than I could chew. And yet each individual transaction should have paid off handsomely. It's the overhead ratio that a contractor must watch — the point of diminishing returns where further efforts don't result in proportionately larger profits."

Mr. Brady's remarks are especially significant at a time when many members of the industry seem to regard size as the true measure of success. Yet he doesn't regard largeness as evil, nor does he believe that a small operation is necessarily more profitable. He feels that each contractor should work out the problem to his own satisfaction after taking all factors into consideration.

He points out that it requires about the same amount of fixed expenses to do a $500 or a $5000 monthly volume. Rent, power, bookkeeping, telephone and such expenditures won't vary much with the two figures. But the moment an ambitious contractor who has everybody on the payroll working at capacity decides it's time to expand, he must carefully consider all angles before doing so.

Mr. Brady calls this step "cracking the nut". When a contractor with an operation geared to a $5000 volume adds a salesman to bring in more business, he will probably find that he must suddenly double his volume to pay the salesman without "taking a beating" on his profit and loss statement. If he goes ahead with the expansion, he'll soon be confronted with the necessity for larger quarters, additional bookkeepers, etc.

What adjustments must a sheet metal contractor make if he thoroughly analyzes the situation and decides that his profit percentage will be higher by concentrating on current activities rather than going after larger jobs?

First of all he must determine what capacity he has with existing facilities. Then he should make sure that he does this amount of business each month, or his net return will decrease proportionately.

Has Triple-Barreled Policy

Steve Brady has a three-fold policy which should prove equally effective in any small shop. His formula consists of: (1) devoting time to managerial rather than mechanical duties, (2) building up a reputation for quality work, (3) modest but productive advertising. By carefully following these three principles he can keep a crew of three or four journeymen busy throughout the year. Most important, the business returns a good margin of profit.

"I work with the tools only when there's a rush job to get out", Mr. Brady explains. "Under any other circumstances it actually costs money for me to remain in the shop. Instead, I spend my time in the field supervising work in progress and contacting customers. Those are duties which can't very well be delegated and yet even a small contractor must provide for them if he is to operate efficiently.

"Since there aren't many jobs going at one time I can keep in close touch with them and make sure that everything is right. That means greater efficiency and more customer satisfaction. I also find it almost mandatory to discuss each job with the customer before work commences. Thus I can determine just what he wants and forestall any misunderstanding."

Emphasizes Top Quality Work

The emphasis on top quality work and giving the customer just what he orders means repeat business for the shop and brings in a great many jobs from firms which are more interested in results than price.

For example, there are many motion picture concerns in the area which regularly depend on Mr. Brady for both maintenance and the fabrication of special equipment. They want everything constructed of sheet metal to look as though it were factory finished. His most recent job was installation of ductwork in classrooms which Houston Color Lab will use for instruction of army personnel.

Probably the best example of a small shop specialty at Brady Sheet Metal Works is the kitchen ventilating hood business done under a sub-contract. The firm's reputation for quality in this field has been built up by handling contracts on Beverly Hills residences. It now fabricates all of the "Provincial" design hoods of Stanthony Corp., which are sold throughout the country.

The hoods are made of cold rolled steel with a copperized finish that is baked on by infra red lamps after the hoods leave the shop. Mr. Brady is able to eliminate practically all slack periods for his crew by scheduling work on the hoods so that it dovetails with other contracts. He's convinced that the trend in modern kitchen design and planning will lead to an increasing amount of hood business.

Uses Limited but Effective Advertising

Stanthony Corp. first contacted Mr. Brady as a result of his half-page advertisement in the local telephone directory's classified section. Although most sheet metal shops have some sort of an ad in the yellow pages, he has made his pay off far better than most by contracting for large space and obtaining the best possible position.

Location of the ad is very important, he points out, because if it doesn't have a dominant position the pulling power will be greatly reduced. Mr. Brady contracts for the top portion of the page closest to the beginning of the sheet metal classification. Since to abandon this spot would forfeit his rights to it, he maintains the ad even when there's more business coming in than he can handle. Over 60 per cent of the new leads are the direct result of inquiries from the directory ad. Several calls come in every day and Brady follows up on them immediately.

He has found this combination of limited advertising for new business, quality work to hold customers, and acting as a manager rather than a mechanic highly effective for keeping his profit level at a peak without stepping out of the small contractor class.

Electrical Wiring Important Factor for Summer Cooling Equipment

WHEN THE prospective buyer inspects a new home, the capacity of the electrical wiring should be near the top of his check-list. The reason is that sooner or later he is going to be interested in installing complete air conditioning, and the capacity of the electrical system to carry this additional load will make a substantial difference in the cost of the installation.

This advice comes from Frank Hudik, president of S.O.S. Sheet Metal Co. of Hackensack, N.J. Mr. Hudik has been watching the spread of air conditioning into the residential field and is now installing year 'round equipment in a custom-made house being erected in Teaneck, N. J. He finds that many builders include air conditioning in the plans offered the public, but make it an optional extra at prices ranging $900 to $1000. A bid to install summer cooling in an older house often must be much higher than these figures to provide for adequate electric wiring to carry the load demand for the electric motor which is usually a 2 or 3 hp single phase unit.

Such electrical demands are usually best supplied by a three-wire, 230 volt service of No. 8 wire. The utility company will supply the leads from the pole to the building but the home owner must provide the conduit and wire from the point at which the power supply is attached to the building, to the main fuses and the electric meter.

The installation of supply leads for air conditioning equipment is no different from the problem handled by the dealer who has been selling electric stoves to the home owner for years.

Installing Ducts for Higher Pressures

. . . was the job of one company which has just finished installing two air distribution systems involving static pressures of 6 in., with initial velocities of 2500 to 3000 fpm. Out of these jobs came some effective and unusual solutions to such problems as air leakage and bowing of ducts

Lawrence O. Paul
Narowetz Heating & Ventilating Co.

THE NAROWETZ Heating & Ventilating Co. of Chicago has just completed two installations using the so called high pressure type of air distribution. In each of these, ductwork construction problems were solved in an unusual way. Both jobs were designed for stores in the new Evergreen Park Shopping Plaza at 95th and Western Avenue, Evergreen Park, Ill., a suburb of Chicago.

The first job was for the Fair Store, a four-story branch department store of approximately 40,000 sq ft per floor. Four fan systems located on the first and second floors serve the entire area. These fan systems are the same as any standard built up system from the outside air intake to the fan suction. That is, they consist of the usual heaters, filters, cooling coil section, casing and drip pan. Here the similarity stops. The fan, instead of operating against a head of approximately 2 to 2½ in. static pressure, is operating against a head of 6 in. static pressure and with initial velocities of 2500 to 3000 fpm.

The ductwork had to be built to withstand the added pressure on the fan discharge, and to take into account the higher velocity used. Systems of this type are designed with the use of galvanized iron sheets in mind, but because of the steel strike and shortage of materials, it was de-



FIG. 1—THE MAIN supply duct on the first job is 150 ft long, and was run at one side of the floor in the service area

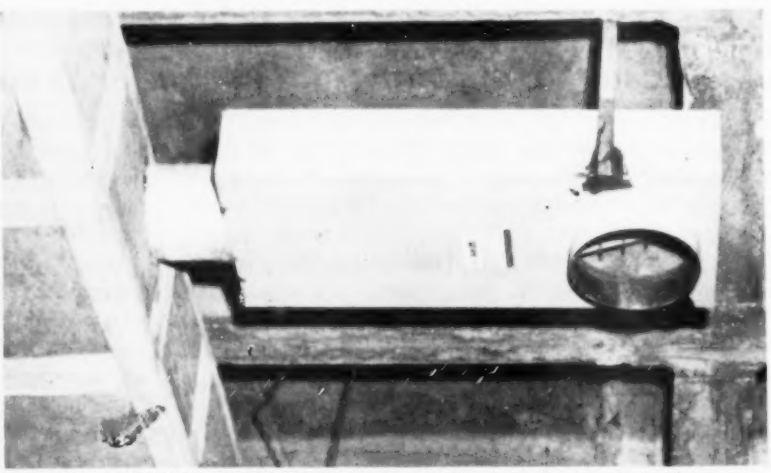


FIG. 2—RIGID CONNECTIONS were made between the sound absorbing boxes and the main ductwork. The boxes were cut into the branch runs after erection of the entire run

cided to use flat aluminum sheets for the ductwork, galvanized iron for the casings, and some fittings and ductwork in the fan room where ducts might be subject to abuse.

The ductwork was to be rectangular and cross broken for rigidity. Since aluminum was to be used, a test mock up section of ductwork was constructed in conjunction with design engineers. The duct was approximately 46 in. x 18 in. x 8 ft long, cross broken on all sides from the 8 ft. corners of No. 0.041 aluminum. Angle iron frames were installed at the 4 ft points.

Duct Sides Become Elliptical

Under pressure, the duct sides tended to become elliptical. At 3 in. of static pressure, the 46 in. sides were bowed out approximately 1½ in.; at 4 in. static pressure, the sides were bowed to approximately 2 in., and at 6 in. of static pressure the duct bowed to 3½ in. at the greatest arc of the bow. The Pittsburgh lock seams showed no signs of pulling apart.

The duct was redesigned with welded angle frames and cross broken every 4 ft. The next test showed that at 3 in. of static pressure, which would be the normal operating pressure, a bow of less than ½ in. on the 46 in. side was noted. This was considered to be within allowable limits for the large ductwork, and construction proceeded.

The ductwork was made as per standard shop practices, but since leakage in a high pressure system can become a major problem, every possible effort was made during erection to keep joint leakage to a minimum. Standard joints with welded frames every 4 ft. were used, with mastic cement being put in the joint before the following piece was connected. Then more cement was placed on the outside before the drive cleat was driven into place. To make certain that all joints on the supply side were as tight as possible, one man was assigned to check all duct runs.

Because of headroom requirements and the floor construction,

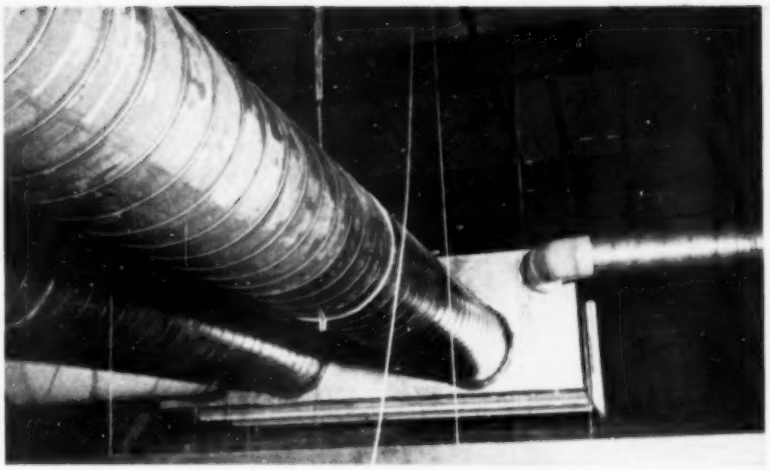


FIG. 3—FROM THE SOUND-ABSORBING plenum, the 24 gage spiral duct was run to the designated areas

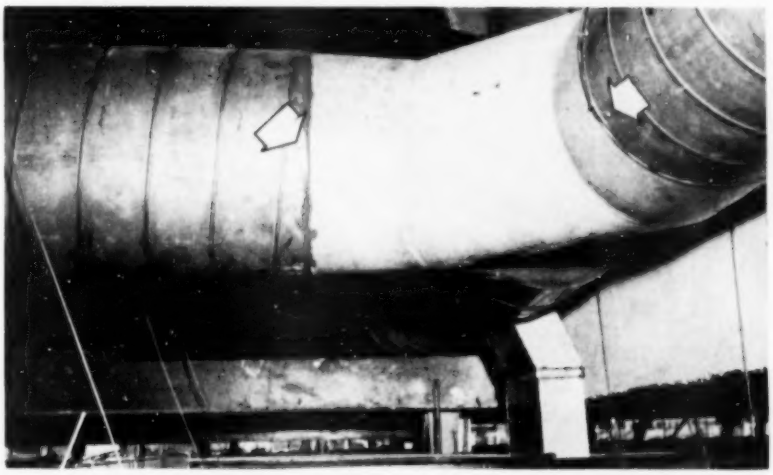


FIG. 4—JOINTS WERE SECURED with sheet metal screws (see arrows) after special sealing compound was applied and the coupling inserted into the pipe. Branch take-off is at lower right

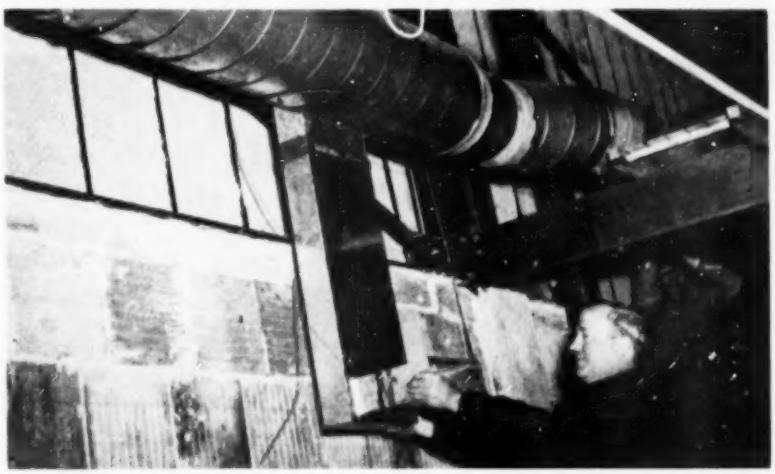


FIG. 5—OUTLET COLLARS were taped into the 20 in. main above the ceiling. No splitters or dampers were used



FIG. 6—THIS WORKMAN spends his full time sealing joints to prevent air leakage in these "semi-high" pressure systems

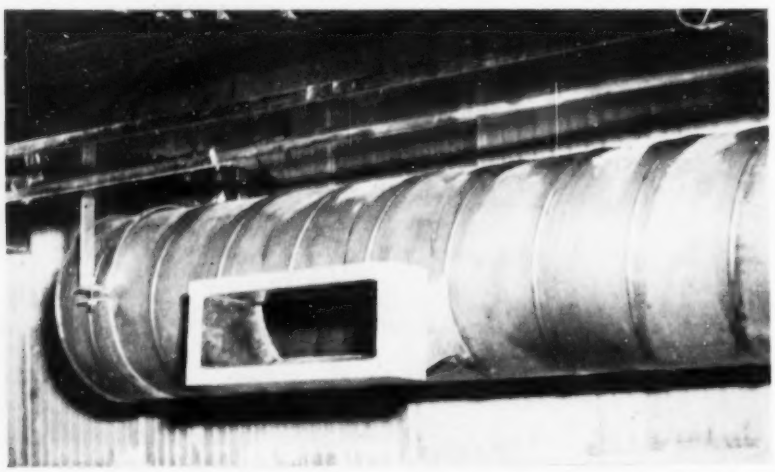


FIG. 7—WHEN DUCT WAS run below furred ceiling, outlet connections like the one shown were made. The ceiling will be furred down to enclose the outlet collar and duct

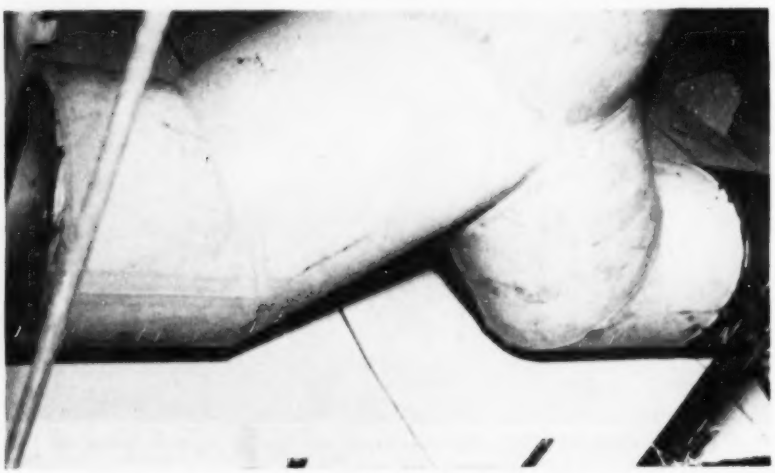


FIG. 8—AT BRANCH RUNS, "Y" fittings like this were used

the main supply duct was run at one side of the floor in the service area. Ducts were then run from the supply main as shown in Figs. 1 and 2. These ducts were the same size from the takeoff to the end of the run, approximately 150 ft in length. The sound absorbing boxes for the outlets were cut into the branch runs after erection of the entire run, and were spaced in accordance with the architectural layout.

In addition to the sound absorber boxes installed at each supply outlet, sound absorbers were installed on each supply main between the fan and the first outlet. They were also installed in a similar manner on the standard construction return air ductwork. These sound absorbers were 10 to 27 ft. long, with 2 in. of muslin covered fiber glass installed on the perimeter of the duct section. To prevent the material from being torn loose by the high velocity, it was held in place by expanded metal over the entire area.

Since it has been placed in operation, the aluminum ducts have proved to be satisfactory with the construction described above. Labor costs were approximately the same as for a standard design job. Erection costs, because of the extra labor involved in sealing joints and checking were higher, but fabrication costs because of the quantities of similar sized ductwork, were lower. The main thing to remember in doing a job of this type is to prevent leakage, especially if the ductwork is not in the conditioned area. Even then, you may have all the air required entering the room, but no air at the remote outlets.

Install Second Job

The other job was installed for Carson, Pirie, Scott & Co., a two story branch store located in the same shopping area. This job used unitary equipment and round ductwork.

One system was located in the fan room of the ground floor, along with the refrigeration equipment, and the other unit was located in the furred ceiling of the first floor in the truss space. The supply units in each case

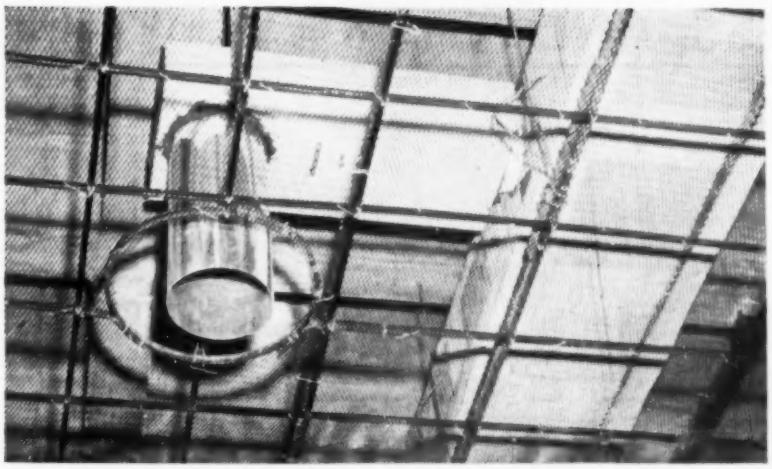


FIG. 9—AN EXTENSION COLLAR on a sound absorbing box, part of the Fair Store job, is shown here with metal lathing in place

discharged into a sound absorbing plenum, which on this job consisted of a rectangular box lined with ½ in. of sound absorbing insulation. From these boxes, the round ductwork, as shown in Fig. 3, ran to the designated areas. This ductwork is 24 gage spiral duct. It was delivered in 20 ft. sections, and since some of the ceiling was already installed, the hanging was a difficult job. However, it was all placed in the ceiling with a minimum of cutting. When sections had to be cut, a power shear was used.

Joints were made with a special coupling furnished with the ductwork. These were about 12 in. long with a raised shoulder in the middle. Where possible, the coupling extends 6 in. into the pipe for support. However, this piece can be used to take up variance in the run of duct, so that a small joint does not have to be made. In assembling, a special sealing compound is applied and the coupling inserted into the pipe. The joint is then secured with sheet metal screws (See Fig. 4).

No Dampers Used

Grille collars were tapped off the main duct as shown in Fig. 5. No splitters or dampers were used. This was because, first, the high pressure system of air handling was used, which assures air to every outlet (similar to blowing into a glove to fill up every finger with air), and second, the ductwork would be furred in, and there would not be any way to operate the dampers. All grilles were 12 in. x 4 in. double deflection, and the collars of equal size are bull-headed into the main.

Return air for this job was handled through standard ductwork, except on the first floor where the return air was gathered to a central point through standard ductwork, and from this point to the fan equipment high velocity was used. The gathering plenum was insulated for sound in the same way as the supply ductwork.

The 24 gage round spiral ductwork was found to be very rigid and capable of standing pressures higher than those used on the job. Erection costs were about the same as any similar round pipe job. The cost of the 24 gage spiral duct as purchased from the manufacturer was found to be equal to similar sizes fabricated at the shop from 22 gage galvanized iron, which gages were thought necessary for the pressure used. The contractor's formed duct was not spiral fabricated.

Although these types of jobs are usually referred to as "high pressure job," the Narowetz Co. likes to refer to them as "semi-high pressure jobs." They should not be confused with the high pressure systems such as other specific types of high pressure systems used for multistory buildings.

Robert McAuley was the superintendent for Narowetz Heating and Ventilating Co. on both of these jobs. Since he had already installed a complete high pressure job at Sinclair Refining Corp., he is asking, "How many more variations can there be?" Actually, those who installed this system think the variations are unlimited and require only a little extra thought to be brought into being.

Where Does Warm Air Go From Here?

IMPORTANT CHANGES in housing have favored automatic warm air heating, according to Frank H. Adams, Surface Combustion Corp. There are several factors which make for the "great potential" of the warm air industry, he says.

"Rising costs, more sensible architectural designs, and simplified living have impelled the creation of smaller, more compact, better insulated, tight houses of lesser heat loss, ideally suited to the advantages of automatic fuels and the application of warm air heating," according to Mr. Adams.

He also points out that the public has become automatic appliance conscious. "In a recent Housing and Home Finance Agency survey of houses built in 1951, 93 per cent had automatic heating. This means a corresponding swing to warm air.

Twenty-five per cent of the automatically fired installations made in 1940 were warm air furnaces and in 1951 there was an increase of 330 per cent in the number of automatic installations made. Warm air installations showed the greatest gain, with an increase of 600 per cent, he says.

Mr. Adams also points to the widespread distribution of natural gas as an extremely important factor stimulating the market for forced warm air heating equipment.

YOUR BUSINESS AND THE LAW



When Are Quoted Prices Binding?

Albert W. Gray

Circulars and other communications containing price information are considered invitations to negotiate, and are not necessarily binding on the dealer quoting the prices. However, under certain conditions, the dealer offering specific terms cannot withdraw them after they have been accepted by the buyer

A MIDWESTERN UNIVERSITY asked for bids for the installation of an air conditioning system of a specific manufacture. The specifications were for a base bid for the cost of the equipment, with three alternate bids — the first, omitting the installation cost of one machine and its auxiliaries, the second, omitting the installation cost of two machines and the third, omitting all refrigeration equipment.

An engineer in assembling this information telephoned a manufacturer of air conditioning equipment for quotations and received in reply a letter, "In accordance with our telephone conversation we tabulate below the vital information for making the necessary quotation for refrigeration to be used in the air conditioning specified. The alternate bid includes one of these machines and the second alternate includes the half capacity machine. . . ." This was followed by a tabulation of specifications and the alternate prices of $26,450 and $18,410.

The contractor's engineer interpreted this letter as naming $26,450 for the cost of two units instead of one, as intended by the manufacturer. Four days later the contractor filed his bid, according to specifications, for the installation of the building's heating and ventilating.

Shortly afterwards the contractor notified the manufacturer of his acceptance of the offer of the two machines for $26,450 and a week later received a reply that the price of $26,450 was for one machine and the price of two would be $52,900, or twice that amount.

The contractor insisted that his letter accepting these quotations was the acceptance of an offer and constituted a contract binding on the manufacturer to sell the equipment for $26,450 for the two units, suing for what it claimed was a breach of contract.

Informative Letter Not a Sale Offer

This letter of the manufacturer, the Federal Court held, was not an offer that became an enforceable contract upon acceptance by the contractor. "It is clear that the language of the letter is not the language of an offeror and indeed, it stretches interpretation beyond propriety to conclude that the words used therein constitute an offer to sell certain machinery at the stated prices. Nor in our opinion do the circumstances surrounding the writing and sending of the letter compel a different result.

"There was no certainty that the contractor would be the successful bidder and subsequently a purchaser from this manufacturer. Certainly the fact that the letter was relied upon for its accuracy did not convert a statement furnishing information into an offer of sale or into insurance against price changes."

During World War II a builder engaged in the construction of a grain elevator and warehouse, and knowing the supply of lumber in the market to be limited, inquired of a dealer for estimates for the necessary material for this structure. The quotations were jotted down on the back of a business card and given to the builder. Later when this lumber dealer refused to deliver the material at these prices, the buyer sued, maintaining that the prices scribbled in pencil on the back of the card represented an offer that upon his acceptance became a valid and enforceable contract.

In deciding the case the court said, "A statement of the prices of merchandise does not become an offer to be

Albert W. Gray, author of this article, has had twenty years experience as an attorney in the courts of New York City. He has written widely on legal matters and is the author of "The Family Legal Adviser".

converted into a contract by an acceptance so long as the one quoting the prices intends to retain the right to sell the articles to any bidder and customer. In order to have such an agreement there must be a complete understanding that one is purchasing and the other selling. In other words the minds of the parties must have met on the terms and conditions making up a contract.

Intention of Owner Has Bearing

"The question whether certain acts or conduct constitute a definite proposal upon which a binding contract can be predicated without any further action on the part of the person from whom it proceeds or constitute a mere preliminary step which is not susceptible, without further action by such party, of being converted into a binding contract depends upon the nature of the particular acts or conduct in question and the circumstances attending the transaction. Whether a communication naming a price is a quotation or an offer depends upon the intention of the owner as it is manifested by the facts and circumstances of the particular case."

From circumstances of this character in which an attempt was made by the buyer to establish a binding contract enforceable against a seller who had quoted prices and later had refused to sell at those prices, there arose a famous case in which the decision established the law that has since been accepted as unquestioned authority.

The letter which the buyer in this case contended was an offer read, "We are authorized to offer fine salt in full carload lots of 80 to 95 bbls., delivered at your city at 85c per bbl. At this price it is a bargain as the price in general remains unchanged. Shall be pleased to receive your order."

To this a reply was sent by telegram, "Your letter of yesterday received and noted. You may ship me 2000 barrels fine salt as offered in your letter. Answer."

The seller refused to ship these 2000 barrels and the buyer sued for a breach of contract, which he claimed to be represented by the letter of the dealer and the answering telegram. Holding that these communications were merely negotiations and had made no contract the court said:

Advertising Not Binding as Offer

"If the letter is an offer to sell on the terms stated, then it must be held to be an offer to sell any quantity, not less than a carload, at the option of the buyer. We deem it much more reasonable to construe the letter as simply notice to those dealing in salt that the sellers were in a condition to supply that article for the prices named and requesting the person to whom it was addressed to deal with them.

"Care should always be taken not to construe as an agreement letters which the parties intended only as preliminary negotiations. We hold that the letter cannot be fairly construed into an offer to sell to the buyer any quantity of salt he might order nor any reasonable amount he might see fit to order.

"The word 'sell' is not used. They say, 'we are authorized to offer fine salt,' etc., and volunteer an opinion that at the terms stated it is a bargain. It is clearly in the nature of an advertisement or business circular, to attract the attention of those interested in that business that good bargains could be had by applying to them."

A midwestern firm received from a dealer the communication, "I am asking 23 cents per lb for the car of red clover seed from which your sample was taken," to which the reply was made, "Telegram received. We accept your offer." When the dealer refused to make this shipment the buyer sued, maintaining the refusal was a breach of a contract to sell, for which he was entitled to damages.

"It is laid down by eminent authority that information or an invitation to negotiate does not constitute an offer," said the court in its decision of this case. "The commonest examples of offers meant to open negotiations and to call forth offers in the technical sense are the advertisements, circulars and trade letters sent out by business houses. While it is possible that the offers made by such means may be in such form as to become contracts they are often merely expressions of a willingness to negotiate."

This distinction between a mere price quotation that is but an effort to attract the attention of a buyer and an offer that lacks but acceptance by a buyer to become a binding contract is not always clear but the uncertainty arises generally from the failure of a dealer to designate beyond question the character of his communication, to say frankly whether he is merely quoting prices or is making a definite offer of sale or services.

One-Sided Obligation Not Binding

A controversy came before a federal court a few years ago in which a contractor had submitted to a dealer the specifications of a contract asking for an estimate for supplying the necessary material which he intended using in the preparation of a bid for a contract he had under consideration.

The dealer's quotation of prices were on two lots of material differing in quality and concluded with, "If successful in being awarded this contract it will be absolutely guaranteed and we are offering these prices for reasonably prompt acceptance after the general contract has been awarded."

A mistake however was made in the quotation of these prices and the following day the contractor received a corrected quotation that was approximately twice that previously furnished. Unfortunately the telegram was not received until after the contractor's bid had been made up and submitted based on the first quotation.

In its decision of the action brought by the contractor against the dealer in which damages were claimed for a breach of contract for the failure to furnish the material at the original price that had been quoted, the federal court said:

"It seems plain therefore, that there was no contract between them. And if there be any doubt as to this, the language of the offer set it at rest. The phrase, 'if

successful in being awarded this contract,' is scarcely offset by the mere quotation of bid prices. Nor can the offer be regarded as of an option giving the buyer the right to accept the goods at the quoted prices if its bid was accepted but not binding it to take and pay if it could get a better bargain elsewhere. There is not the least reason to suppose that the seller meant to subject itself to such a one-sided obligation."

Not every price quotation, however, escapes classification by the courts as a formal offer needing but an unqualified acceptance for transformation into a binding contract. Another famous decision by a court of appeals has been followed by the courts for over fifty years in running this boundary line that separates an advertisement and an offer that, with acceptance, becomes a binding enforceable contract.

A telegram was sent by a customer to a dealer, "Please advise us the lowest price you can make us on our order for ten carloads," followed by a description of the goods desired. The reply made by the dealer three days later was, "We quote you * * * for immediate acceptance," to which the customer telegraphed the response, "You letter twenty third received. Enter order ten carloads as per your quotation." To this telegram the dealer replied, "Impossible to book your order. Output all sold."

Where Buyer's Intention Clear, Offer is Binding

In the suit brought by the customer the dealer maintained he had a right to refuse acceptance of this order, while the buyer on the other hand contended that the telegram, "Enter order for ten carloads as per your quotation," accepted the offer and created a binding and enforceable contract and that for the failure to deliver the goods the seller was liable in damages for breach of contract.

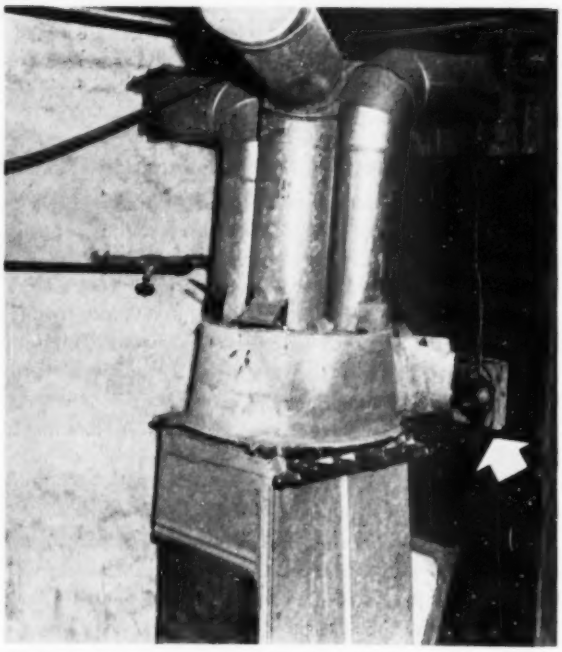
The court of appeals of that state, sustaining the judgment for breach of contract awarded the buyer by the lower court, said:

"In this case we think there was more than a quotation of prices although the dealer's letter used the word 'quote' in stating the prices given. The letter which began the transaction did not ask for a quotation of prices. It reads, 'Please advise us the lowest price you can make us on our order for ten carloads.' From this the dealer could not fail to understand that the buyer wanted to know at what price it would sell it ten carloads of specified merchandise. So when in answer it wrote sending the prices asked, it must be deemed as intending to give the buyer the information asked for.

"We can hardly understand what was meant by the words 'for immediate acceptance' unless the letter was intended as a proposition to sell at those prices if accepted immediately. The buyer's letter was plainly an inquiry for the price and terms on which the dealer would sell it the goods and the dealer's answer to it was not a quotation of prices but a definite offer to sell."

[Note: While this discussion applies to actual cases, it should be remembered that legal rules vary in different states.]

Not To Be Duplicated!



During a routine tour which was part of the home inspection program of the Fire Prevention Bureau, Lexington, Ky., inspectors discovered a home-made "furnace." It was reported to the bureau, and further investigation revealed full details on the construction and component parts.

The heating system was constructed of an old style, four-burner top cooking stove. The plenum chamber was an inverted washing tub placed over the top burners, with hot air ducts connected to it. The forced air system was a fan (see arrow) blowing directly into the side of the tub, thereby forcing heat and fumes directly into the duct system. A small amount of fresh air was admitted to the system by means of louvers at the base of each duct.

Occupants were given written notice to discontinue the operation of this unit, and a reinspection 10 days later revealed installation of an approved furnace.

Shop Tour Impresses Students

The cover picture on last month's American Artisan showed students from American University in Washington, D.C., being conducted by Lawrence E. Gichner through his shop. Such tours, Mr. Gichner pointed out in the accompanying article, promote good public relations.

That this point was well taken is shown by the report which the students wrote in their publication, the S.A.M. (Society for the Advancement of Management) Newsletter. They state that, "The trip was very interesting and profitable. . From what could be observed, employer — employee relationships seemed to be very good. The trip was concluded with an excellent lunch."

How Shop Efficiency Can Be Improved

Using information gleaned from modern studies of industrial efficiency, the sheet metal man can find ways to conserve manpower in his shop, and to thereby reduce his costs and increase his production through general efficiency. To reach these goals, he must ask himself specific questions about the purpose of each operation, the layout of the working area, the materials used, and many other important points

A GOOD METHOD of saving manpower in a sheet metal shop is to simplify the work and eliminate some of it altogether. The result is the same number of employees producing an increased amount.

This method of saving manpower is widely used because it builds constructive advantages. The approach that employees' work is to be made easier touches a responsive chord and wins cooperation.

There are three specific benefits which usually result from a program to save manpower: Costs are reduced; production is increased; and employees who leave to go into the armed services, or for other reasons, may not have to be replaced.

Program Moves Rapidly

In general, the major portion of the job of developing a program for saving manpower in a shop must be done where the employees are working. The process is to study each operation from various viewpoints until a clear understanding of what is being done is gained and a possibly better way of doing it becomes apparent. The suggested change is then compared with the present method to see which offers the greater advantages.

This may seem to be a long, drawn-out process, but once the program is begun, it moves rapidly.

The points considered in studying each operation frequently are:

1. Purpose of the operation (why is it being done)?
2. Can the design of the part be changed to require less work?
3. Inspection of specifications.
4. Layout of working area.
5. Equipment and tools.
6. Methods used.
7. Materials used.
8. Methods of handling materials.
9. Working conditions.
10. Training and supervision of workers.
11. Compensation.

Typical Questions Asked

Many typical questions may be asked in regard to these different points. For instance, when considering the purpose of an operation, the investigator might ask:

1. Can this operation be done better at a previous or subsequent point?
2. Does a subsequent operation eliminate the need for this operation?
3. Is the operation duplicated elsewhere in the shop?
4. If the operation is the production of a part, could the part be purchased at a lower cost instead of being made?

In regard to layout of the work area, questions might include:

1. Does material move in and out of the shop without backtracking?
2. Does the position of equipment and tools permit their most effective use?
3. Could the position of tables and benches be improved?
4. Can a continuous operation be performed?

As to equipment and tools, typical questions might be:

1. Is oiling of machines a regularly scheduled job?
2. Is any handwork being done that could be done better and faster on a machine?

A number of questions are often asked in any study of methods used. For example:

1. Would a foot control save time?
2. Is any operator using a superior method which could be adopted by others?
3. Would specially designed tables or benches help production?
4. Are tools and parts within easy reach?
5. Will a change of layout permit the pairing of machines?

In regard to materials and materials handling, one might ask:

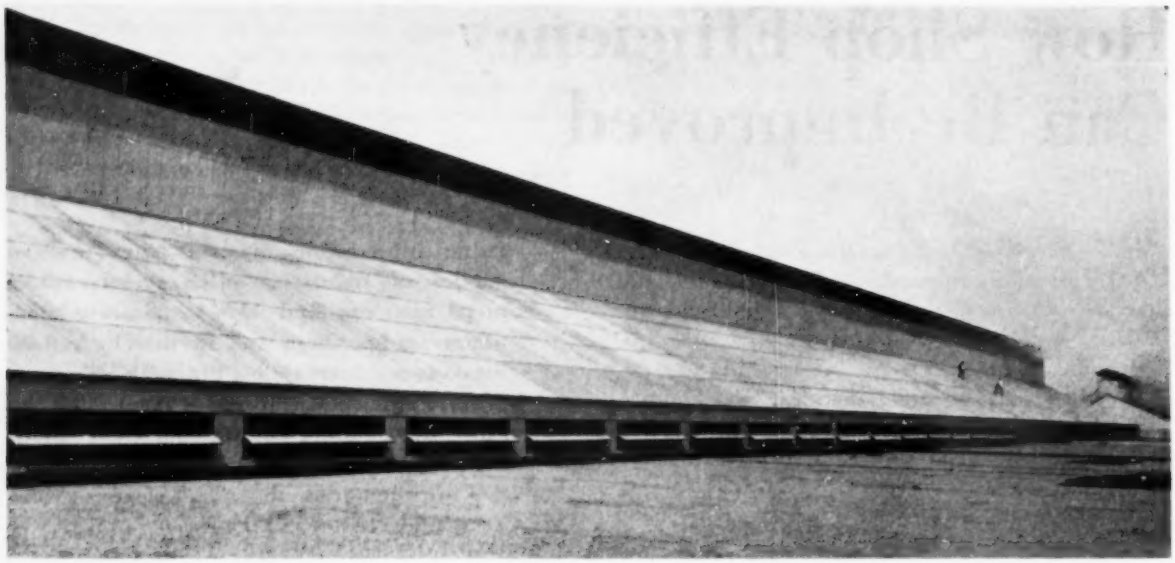
1. Can a different material be used to advantage?
2. Can trucks, pallets, or some other type of conveyor be used?
3. Can rehandling and recounting of material and parts be avoided?

Questions that should be asked in the matter of working conditions are:

1. Is the light ample and uniform, but with no glare?
2. Is there good ventilation, but without draft?
3. Are safety guards provided, and is every effort made to prevent accidents?
4. Are aisles kept clear?

As to the training and supervision of workers, even a skilled worker has to be told how a new job should be done. Sometimes this telling is oral; in other cases, it is by blueprint and written instructions. The skilled worker also must have tasks assigned to him and his work must be checked.

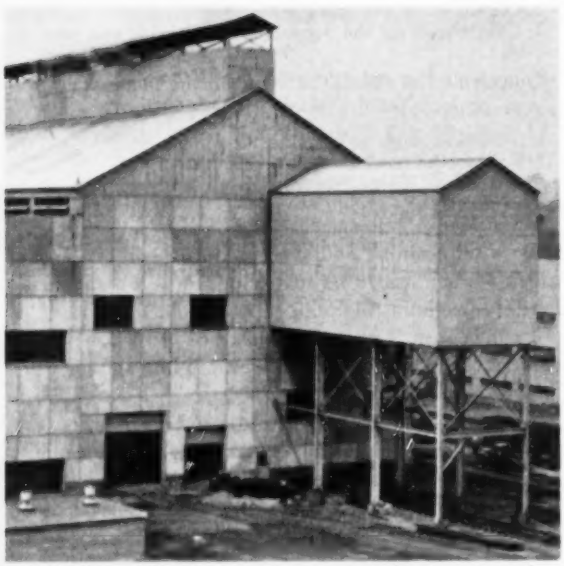
Once a shop has found ways of saving manpower, two steps must be taken to see that the savings are actually made. First, the improvements must be placed in effect. An idea is without value unless it is used. Second, there must be a continuous check to see that the improvements stay in effect. Employees may at times slip back into their former methods unless they are required to use the improved methods until they become accustomed to them.



THE SLOPING ROOF and the roof of the continuous smoke stack on the furnace building are constructed of corrugated sheets of stainless steel. About 93,000 sq ft of sheeting were used

Two Acres of Stainless Steel Roof

. . . protect a furnace building at a newly completed ferro-alloy plant. This metal was chosen because it could withstand both furnace heat and atmospheric corrosion



SHORTER PIECES of stainless steel sheet were used around this head house. The vertical sheeting at the sides of the monitor is galvanized iron

ALMOST TWO ACRES of corrugated stainless steel sheet cover the top of a furnace building at the new Electro Metallurgical Co. ferro-alloy plant in Marietta, Ohio.

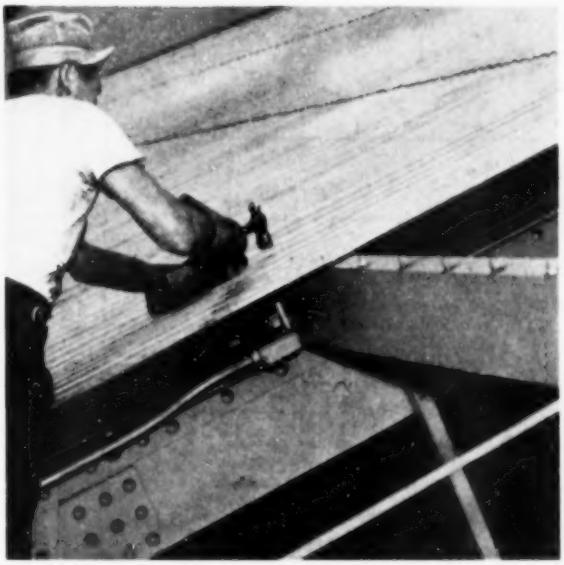
The building is 660 ft long and 160 ft 6½ in. wide. Running the length of the roof at its center is a monitor, or continuous smoke stack. Stainless steel covers the sloping roof area leading up to this monitor, and also the roof of the monitor itself. Altogether, there are 78,000 sq ft of stainless steel roof. The actual area of the sheeting used is approximately 93,000 sq ft, since the sheets were lapped 6 in. on each end and one and a half corrugations on each side.

Approximately 3600 sq ft of stainless steel flashing were used at the top of the monitor, the junction of the monitor sides and the main roof, the head house (on the north side at the center of the building), and around the stacks.

The sheets used were mainly 9, 10½ or 11 ft in length. Shorter pieces were used at the furnace stacks and around the head house. The sheeting is 20 gage, Type 430 stainless (14 to 18 per cent chromium), with 2-B finish and 2½ in. corrugations, the corrugated sheet be-



FIRST, STUDS on 8 in. centers were welded to the purlin with a portable tool . . .



. . . THEN, THE SHEET was placed over them and driven down with a hammer to expand the stud

ing 27½ in. wide after forming. The flashing is the same type of material, furnished in flat sheets 8 to 36 in. wide and 10 ft long. The sheets were fastened to the purlins with 3/16 in. studs placed at 8 in. centers. The side laps were secured by No. 14 galvanized sheet metal screws ¾ in. long, with metal and neoprene washers spaced at 18 in. centers.

How Sheets Were Installed

With a template being used to insure correct spacing, the purlins were marked to indicate the location of the studs. The studs were placed one at the top of every third corrugation and were then welded to the purlin with a portable, 110 volt, a-c welding machine with cable leads from the electrical power supply to the welding gun.

After the studs were welded, the sheet was placed over them and the sheet driven down over the studs by a blow, with a 1½ lb hammer, beside each stud. Then the top of each stud was hit with the hammer to expand the stud in the hole through the sheet, thus securing the sheet.

Though the main roof and monitor roof are stainless steel, the vertical sheeting at the gable ends and sides of the monitor is galvanized iron, painted grey.

The company selected stainless steel because it was felt the material could best resist the furnace heat and general atmospheric corrosion. A 25-year-old stainless steel roof has been bearing up extremely well on a building at one of its other plants.

High Velocity Systems a Trend

IN THE OPINION of C. M. Wilson, sales manager, Anemostat Corp. of America, high velocity air distribution systems represent a distinct trend. In fact, he believes that within two years, virtually all air conditioning installations of 75 ton size or larger will incorporate high velocity, high pressure air distribution systems.

Speaking at a recent (December 8) meeting of the Illinois Chapter, American Society of Heating and Ventilating Engineers, Mr. Wilson described high pressure, high velocity systems as those which generally require the use of special devices for the attenuation of sound and dissipation of pressure and velocity near the air outlets. After showing slides of various types of diffusers, Mr. Wilson described a high pressure, high velocity diffuser as a conventional diffuser with a dampering device to reduce pressure, velocity and sound.

After demonstrating how the use of velocities higher than those in conventional systems results in smaller duct sizes, he mentioned that advantages of this type of system include savings in space required for ductwork, savings in duct material and the cost of ductwork, and the elimination of much "butchering" of existing buildings in order to install air conditioning. An advantage to the contractor which he stressed is the fact that smaller ducts result in reduced labor costs so that a higher percentage of the total job cost is in connection with material and equipment having readily determined costs.

Disadvantages he mentioned included relatively higher fan operating costs. Reasonable maximum velocities in the average high pressure, high velocities systems are from 3600 to 4000 fpm, he stated. However, circumstances often permit velocities up to 6500 fpm.

The speaker was introduced by N. E. Bueter, Chicago consulting engineer, who also participated in the lively question and answer period which concluded the meeting.

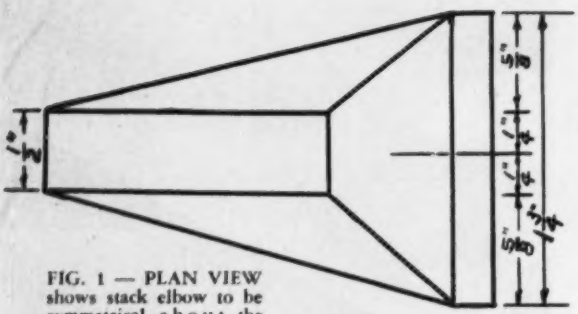


FIG. 1 — PLAN VIEW shows stack elbow to be symmetrical about the center line

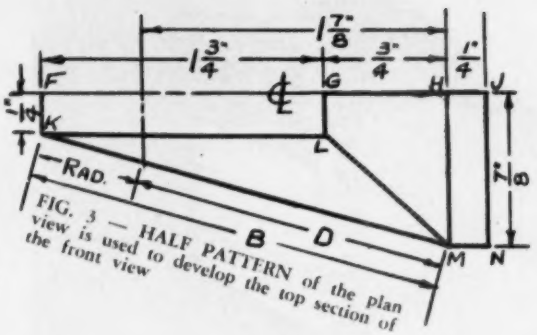


FIG. 3 — HALF PATTERN of the plan view is used to develop the top section of the front view

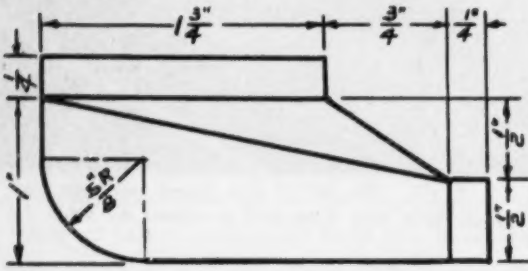


FIG. 2 — FRONT VIEW provides rise distance which helps give the true length line in the simplified method

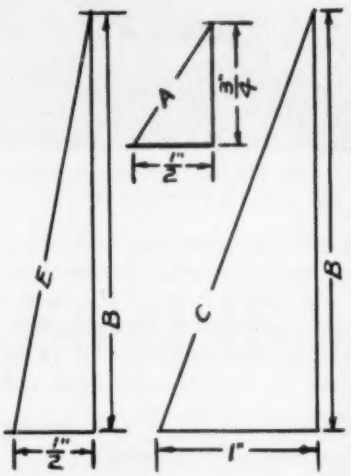


FIG. 6 — TRUE LENGTH LINES used in developing Fig. 1-5

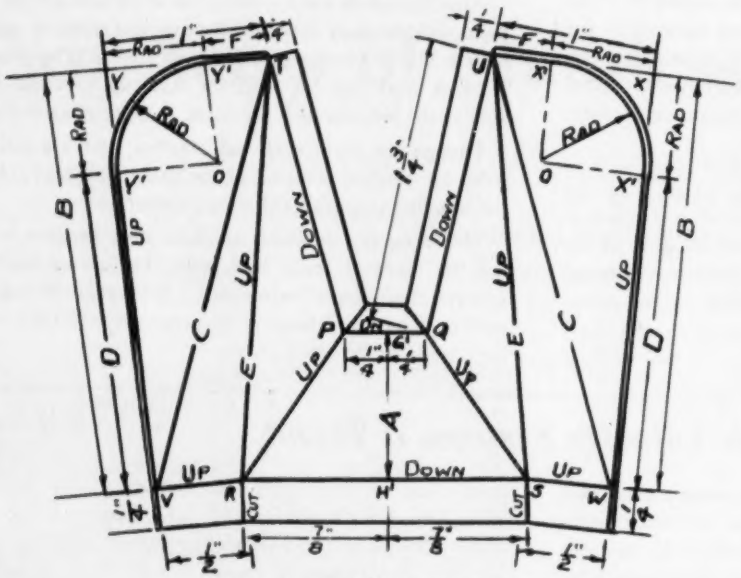


FIG. 4 — THROAT AND SIDE PATTERN is developed from dimensions obtained from Fig. 3



FIG. 7 — PICTORIAL VIEW of reverse stack elbow

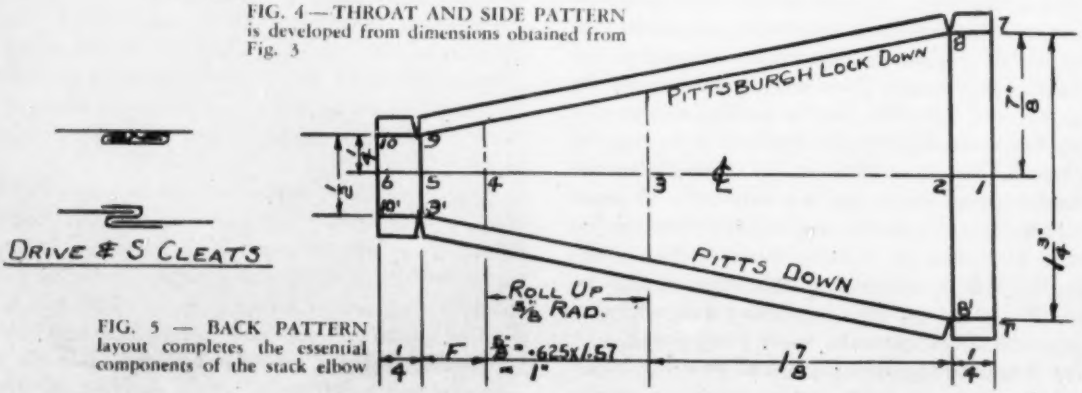


FIG. 5 — BACK PATTERN layout completes the essential components of the stack elbow

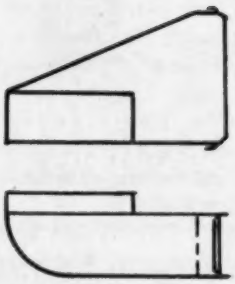


FIG. 8 — THE "HESS" ELBOW cannot be substituted for the reverse stack elbow in forced air systems

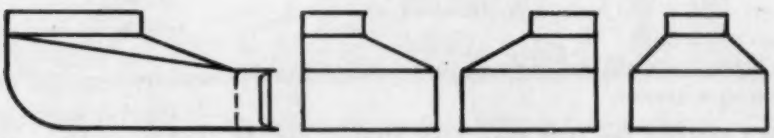


FIG. 9 — USING PATTERNS developed in Figs. 1-5, the reverse stack elbow (left) can be adapted to form a left hand elbow (a) right hand elbow (b) or center elbow (c)

Making a Center Reverse Stack Elbow

Here is a pattern development which is correct enough so that the fitting can be fabricated of light metal and the component parts Pittsburgh lock seamed. The limitations of a simpler substitute fitting also are discussed

Hugh B. Reid
Instructor Sheet Metal Pattern Drawing

KEEN COMPETITION in the domestic heating field has made the use of empiric methods a "must" in pattern layout. The problem pattern for this month presents a pattern development which is near enough correct so that the fitting can be fabricated of light metal and the component parts Pittsburgh lock seamed.

Should the fitting be part of a dust collection system or an acid fume exhaust system in which 18 gage metal or more would be required, the heavier gage metal would necessitate the development of a true pattern in which the lines would be developed from two views by the parallel line method of development. In the true pattern layout, lines 8-9, 9-10, on Fig. 5 would not be straight lines; therefore, the Pittsburgh lock seam would have to be substituted for a riveted seam or a welded seam which would result in a cost increase for the layout and fabricating of the fitting.

Substitute Fitting Has Limited Use

A fitting commonly used as a substitute for the reverse stack elbow is the "Hess Elbow" fitting, shown in Fig. 8. This type of fitting presents a simplification in layout and fabrication as compared to the work involved in the reverse stack elbow and it can be used quite effectively on a gravity system. On a forced air system where air is under pressure from a fan and consideration must be given to friction losses in the duct system, it can be readily understood that the square throat design of the "Hess" type elbow fitting would make its use impractical.

A velocity meter at the back of the elbow would show a high velocity reading, and this would indicate that loss is occurring at the throat of the elbow. This loss will continue up into the wall stack on the throat side of the elbow and will vary with the velocity; the higher the velocity, the greater will be the loss. In the reverse stack elbow, the rise in the throat of the elbow will allow the air to flow more smoothly into the wall stack. This will eliminate much of the friction loss in the elbow and the wall stack.

It is therefore recommended that the reverse stack elbow be used in preference to the "Hess Elbow" fitting on forced air installations.

The Simplified Method of Pattern Layout

Note from the plan view that the stack elbow is symmetrical about the center line. This suggests that all true length lines can be developed by transferring the projection of the rise lines on the half plan view to the vertical leg of a right angle and the rise distance dimensions as shown on Fig. 2 to the horizontal leg of the right angle. The hypotenuse of the triangle will be the true length line.

Following is the step by step procedure for the pattern development.

To Construct the Half Plan View Marked Fig. 3:

(1) Draw the horizontal line marked CL, (center line), establish the point F, and from this point measure 1¾ in. and mark the point G.

(2) From G, measure ¾ in. and mark the point H. From point H, measure ¼ in. and mark the point J.

(3) From F, G, H, and J, draw lines perpendicular to center line. From points F and G, measure ¼ in. and mark the points K and L. From points H and J, measure ⅞ in. and mark the points M and N.

(4) Draw lines K-M, M-N and L-M.

To Layout the Throat and Sides Patterns Marked Fig. 4:

(1) Draw a right triangle. From Fig. 3 transfer length ¾ in. to the vertical leg and distance ½ in. from Fig. 2 to the horizontal leg. The hypotenuse of the triangle marked A is the developed line (top, center, Fig. 6)

(2) Draw the vertical line A. Mark the extremities of this line H′, G′ and through the points draw lines perpendicular to line A. From point G′, mark ¼ in. on both sides of line A and mark the points P, Q. From H′ measure ⅞ in. on both sides of line A and mark the points R,S. Draw the lines P-R, R-S, S-Q, P-Q.

(3) With K-L on Fig. 3 as radius and points P and Q on Fig. 4 as center, draw arcs.

(4) Draw a right angle. From Fig. 3 transfer length B to the vertical leg and distance ½ in. from Fig. 2 to the horizontal leg. The hypotenuse of the triangle marked E is the true length line (left, Fig. 6). With length E as radius and points R and S as centers draw arcs to cut the arcs drawn from P and Q. Mark the points T and U.

(5) Length B is transferred from Fig. 3 to the horizontal leg of a right angle and length 1 in. from Fig. 2 to the horizontal leg. The hypotenuse of the triangle marked C is the developed line (right, Fig. 6).

(6) With C as radius and points T and U on Fig. 4 as centers draw arcs. With R and S on Fig. 4 as centers and ½ in. on Fig. 2 as radius, cut the arcs drawn from points T and U. Mark the points V and W.

(7) Measure length B on Fig. 3. With V and W on Fig. 4 as centers and B as radius, draw arcs. With length 1 in. on Fig. 2 as radius and points T and U on Fig. 4 as centers, cut the arcs drawn from points V and W. Mark the points X and Y.

(8) Measure length Rad. on Fig. 3. With points Y and X on Fig. 4 as centers and distance Rad. as radius, establish points X′ and Y′ on lines D and 1 in.

(9) From points X′ and Y′ on lines D and 1 in., draw perpendicular lines to intersect at points O. With points O as centers and radii O-X′, O-Y′, draw 90 deg arcs.

(10) From lines T-P, P-Q, Q-U, add the given collar length and through the points draw lines.

To Layout the Back Pattern Marked Fig. 5:

(1) Draw a horizontal line. On this line establish the point 1. From 1, measure lengths ¼ in., 1⅞ in., 1 in., ⅜ in., ¼ in. Through the points draw lines perpendicular to the horizontal center line. (*Note*: The 1 in. length is calculated by multiplying the given ⅝ in. radius by the constant 1.57).

(2) Transfer length ⅞ in. from Fig. 3 to both sides of the center line at points 1 and 2 on Fig. 5 and mark the points 7, 7′, 8, 8′.

(3) Transfer length ¼ in. from Fig. 3 to both sides of the horizontal center line at points 5 and 6 on Fig. 5 and mark the points 9, 9′, 10, 10′.

(4) Draw lines connecting 7-8, 8-9, 9-10, and 7′-8′, 8′-9′, 9′-10′. From these lines add the necessary allowance for the Pittsburgh lock seam.

Add the other necessary allowances for seams and joints and mark patterns for forming.

Mechanical Collector Eliminates Dust Nuisance

Recently in a small city, a new plant built to manufacture toys was disposing of waste material by burning it in the commercial incinerator erected for this purpose, and there developed a serious atmospheric contamination problem. The answer was to install a dust collector to retain the fly ash.

There were numerous commercial mechanical collectors available from which to choose for this installation. The range in available collection efficiency approaches nearly complete removal of the last traces of ash, but, with the more thorough clean-up comes a rapid rise in cost.

There were no local ordinances establishing the required collection efficiencies or limiting emission rates. Lacking any such mandatory regulation, the model ordinance suggested by the ASME was used as a guide. The ASME Code requires that the dust loading of stack gases shall not exceed 0.25 grains per cu ft with the exception that a collector efficiency of not more than 85 percent is required for new plant installations.

A mechanical collector does not give a clear gas leaving the stack. The very fine particles that remain give color to the gases, and if there is a high carbon content in the particles, then the appearance of the discharge gases will be dark, even though the dust loading of the gas is light. The color of the gases leaving the stack, though it was carefully considered, was not a determining factor.

The efficiency of the mechanical collector will drop off rapidly as the particle size decreases, especially when the particles are 10 micros or smaller.



Erie Group Hears Talk on Electric Controls

THE SHEET METAL AND ROOFING Contractor's Association of Erie, at the November meeting, had as its guest William Schmotzer of the service information division of White Rodgers Electric Co., St. Louis. He conducted an informative meeting on electric controls used in automatic heating.

Kalamazoo Association Elects New Officers

OFFICERS elected for 1953 by the Kalamazoo Sheet Metal, Roofing, Heating & Air Conditioning Contractors' Association are: president, Myron A. Rice; vice president, Bryant Kistler; treasurer, John DeHaan; secretary, E. J. French.

Air Conditioning Film Shown at Detroit Meeting

HIGHLIGHT of the December 11 meeting of the Detroit Warm Air Heating Association was a sound film in technicolor on air conditioning, shown through the courtesy of Temperature Control, Inc., and the Carrier Corp. Temperature Control, Inc. also provided the evening's speaker, who spoke on the subject of year 'round air conditioning.

Program Planned for Indiana Convention

THE CONVENTION COMMITTEE of the Sheet Metal and Warm Air Heating Contractors Association of Indiana, Inc., met recently at the Saenger-Chor Hall, Indianapolis, to discuss plans for the forthcoming 35th Annual Convention, to be held Feb. 5-6 at the Hotel Severin, Indianapolis. An attractive program is being planned which will provide educational lectures and many entertainment features.

Tentative program for Thursday includes board and committee meetings in the forenoon, to be followed immediately after luncheon by business sessions, with election of officers and committee reports. There will be a talk on gross income tax by Marshall D. Abrams, executive secretary, Building Congress of Indiana. Mr. Abrams will also speak on current legislative problems in the construction industry.

On Friday, J. D. Wilder, executive secretary, Sheet Metal Contractors National Association, will speak on governmental legislation. W. D. Redrup, president, National Warm Air Heating and Air Conditioning Association, will give a talk on perimeter and small pipe heating systems. Art Gilkenson, The Meyer Furnace Co.,



Committeemen in attendance at the Indiana association's annual meeting will be: *(l. to r.)* Front Row—Elmer Love; Harold Boyd; Frank Anderson; Merle Daily, president; Homer Selch; Bill Shirley, president, Fur-Mets; Don McCloskey, convention chairman; Harry Singleton; Second Row—Geo. Vyverberg; Bob Hurt; Marvin Brezette; Al Nemec; Ray Boyd; Tom Williams; Howard Tout; Ben Speaker; Wm. Garber, Jr.; Third Row—Frank Stewart; Bob Renick; Bill Meador; Dick Watson; Oscar Mutz; Charles Buck, president, Indianapolis Association; Leonard Hull; Morris Ellsworth

will cover summer air conditioning.

One of the highlights of the convention will be a banquet on Thursday evening, followed by dancing in the roof garden. The Indiana Fur-Mets, an organization of sponsor sales representatives, will provide entertainment on Friday evening.

Chairmen of the committees are: convention, Don McCloskey and Harold Boyd; program, Wm. E. Garber, Jr.; hotel, Homer Selch; reception, Al Nemec; banquet, Frank E. Stewart; luncheon, V. Hazelton; entertainment, Elmer Love; ladies, Morris Ellsworth; publicity, Oscar Mutz; question box, Cleo Fox.



THE EXECUTIVE and convention committees, working together on the convention include: *(l. to r.)* Homer Selch, treasurer; H. M. Daily, president; Frank Anderson, secretary; Harold Boyd, secretary, Indianapolis Association; Don McCloskey, convention chairman

Association Paper Celebrates 2nd Birthday

The Roofing and Sheet Metal News, official organ of the Roofing and Sheet Metal Contractors Association of Georgia, celebrated its second birthday with the publication of its November 1952 issue. The *News* has increased its readership from 350 to 1500, an increase paralleled by the growth of the association it represents, which now has 60 members on its roster as compared to 30 two years ago when the first edition of the paper was published.

Administering the affairs of the Georgia Association is no simple matter, according to a recent edition of the paper. For example, work done by the officers during the first 10 months of 1952 included: writing 1000 personal letters; preparing 152 articles, notices, special bulletins, etc., and mimeographing and mailing same; addressing, stamping and mailing approximately 15,000 copies of the *News*; furnishing data and reports to national and regional trade magazines; making arrange-

(Please Turn to Page 262)

Coming Events

Jan. 18-21 — New York State Sheet Metal, Roofing & Air Conditioning Contractors Association, Annual Convention. Statler Hotel, Buffalo. Clarence J. Meyer, Executive Secretary, 567-69 Genesee St., Buffalo 4.

Jan. 26-28 — National Roofing Contractors Association, 66th Annual Convention. Bellevue-Stratford Hotel, Philadelphia.

Jan. 26-29 — American Society of Heating and Ventilating Engineers, 59th Annual Meeting. Conrad Hilton Hotel, Chicago. A. V. Hutchinson, Secretary, 62 Worth St., New York 13.

Jan. 26-30 — 11th International Heating & Ventilating Exposition (The Air Conditioning Exposition). International Amphitheatre, Chicago. Charles F. Roth, Manager, International Exposition Co., Inc., Grand Central Palace, New York 17. See special Show Section in this issue.

Jan. 28-30 — National Heating Wholesalers Association, Inc., Annual Meeting. Congress Hotel, Chicago. Stuart Rambo, Executive Secretary, 637 Union Commerce Building, Cleveland 14.

Feb. 5-6 — Sheet Metal and Warm Air Heating Contractors' Association of Indiana, 35th Annual Convention. Hotel Severin, Indianapolis. Frank E. Anderson, Executive Secretary, 439 S. 17th St., Terre Haute.

Feb. 9-11 — Sheet Metal Contractors' Association of Wisconsin, Inc., Annual Convention. Schroeder Hotel, Milwaukee. I. F. Kanitz, Executive Secretary, 225 E. Michigan St., Milwaukee 2.

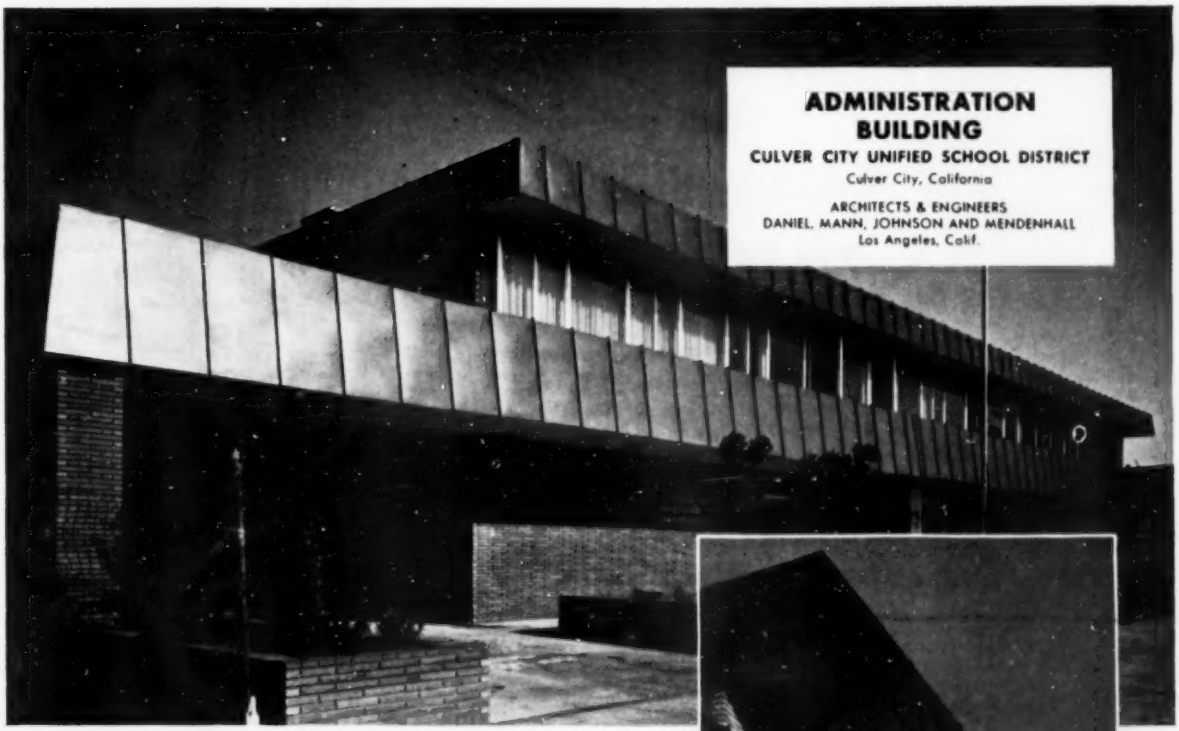
Feb. 16-19 — Industrial Ventilation Conference. Michigan State College, East Lansing. Developed by Div. of Industrial Health, Michigan Dept. of Health, and the School of Engineering, Michigan State College.

Feb. 23-25 — Ohio Sheet Metal Contractors' Association, Annual Convention. Mayflower Hotel, Akron. Wm. C. Lumm, Secretary, 2512 Albion St., Toledo.

Feb. 26-27 — Michigan Sheet Metal, Roofing, Heating and Air Conditioning Contractors' Association, 42nd Annual Convention. Hotel Durant, Flint, Mich. N. J. Biddle, Secretary, 3035 E. Grand Blvd., Detroit 2.

Apr. 15-16 — Sheet Metal Contractors' Association of Illinois, Inc., Annual Convention. Jefferson Hotel, Peoria. E. A. Schmidt, Secretary, 1210 E. Laurel St., Springfield, Ill.

May 4-6 — Sheet Metal Contractors' National Association, Annual Convention. Jung Hotel, New Orleans. J. D. Wilder, Executive Secretary, 170 Division St., Elgin, Ill.





ANOTHER CASE OF

Copper

WHERE IT COUNTS

FROM THE DESIGN AS WELL AS FROM THE UTILITARIAN STANDPOINT

Revere Copper plays a dual role in this building which won an award from the Southern California Chapter of A. I. A. in their annual competition. It has been used in the facias in combination with the brick walls to create an unusual and striking effect. In fact the flexibility in design of Revere Copper is practically limitless. At the same time its non-rusting and enduring qualities place maintenance costs at the vanishing point.

Those are the reasons architects and builders prefer to use this "ageless" metal whenever they can. And sheet metal contractors are glad when it is specified because it is so readily worked and soldered.

In addition to the 2,000 sq. ft. of 16 oz. Revere Sheet Copper being used for the facias, the roof flashing also was made of 16 oz. Revere Sheet Copper, the entire building taking some 2,500 lbs. The Main Cornice Works, Inc., Los Angeles, Calif., were the subcontractors who did the installing, while Brunzell Construction Company, Culver City, Calif. were the general contractors.

Now, with restrictions eased, and quantities permissible without allotments greatly increased, there isn't any reason why your next job can't have the many benefits of Revere Copper. See the Revere Distributor nearest you about Revere Sheet, Strip or Roll Copper for flashing. Particularly ask him about the money-saving advantages of Revere Keystone Thru-Wall Flashing.* And, if you have technical problems, he will put you in touch with Revere's Technical Advisory Service.

*Patented

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

230 Park Avenue, New York 17, N. Y.

* * *

Mills: Baltimore, Md.; Chicago and Clinton, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N. Y.— Sales Offices in Principal Cities, Distributors Everywhere

SEE REVERE'S "MEET THE PRESS" ON NBC TELEVISION EVERY SUNDAY



Says MAURICE ESSER,
Respected Viking Representative
In New York State

"My Dealers and Distributors tell me that Viking BLOWER PACKAGES will be bigger than ever in '53!"

1950
1951
1952
1953

The smooth streamlined design and efficient operation of the Viking Blower Package made 1952 a banner sales year. But my customers in New York State and in Pennsylvania tell me they expect 1953 to be better by far."



C. H. STARR, BINGHAMTON DISTRIBUTOR, SAYS . . .



"Viking's speedy installation that saves up to 45 minutes on each unit makes this Blower Package a favorite with our dealers. And its trouble-free operation adds extra job savings too. I think this coming year is going to see Viking Blower sales reach a new high."

C. H. STARR,
Northrup Supply Corp.,
168 Water St., Binghamton, N. Y.

READ WHY AGGRESSIVE DEALERS EXPECT Viking TO MAKE SALES HISTORY



"I like Viking because of their exclusive motor mount. It lets me work out in the open and I can really save installation time that way. Fifty-two was a good year for me, but I'm sure '53 is going to top it by a lot."

LEE HOWLAND, Howland's Hardware,
South Lansing, N. Y.



"Yes sir, I personally prefer Viking's snap-out filter ledge. All it takes is one man to position the cabinet and set it in the assembly. With that kind of deal in Viking Blowers, awfully good money is easy to make."

RALPH L. ADAMY,
Ralph L. Adamy Plumbing & Heating,
184 Dodge Ave., Corning, N. Y.



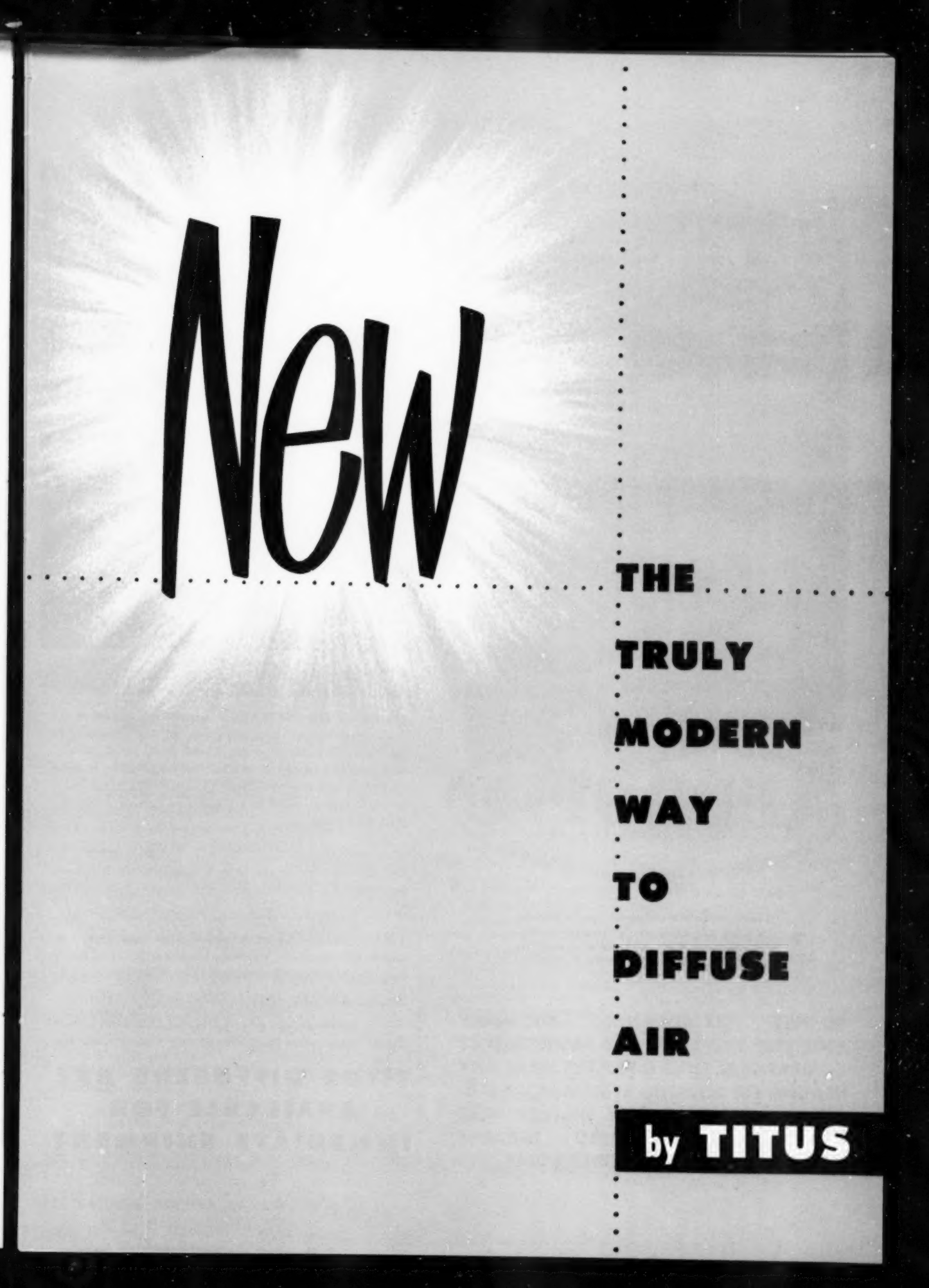
"You can't miss with Viking this year. Look at just a few of its features — the new oil-less bearing, good for five years or more without oil, a spring thrust takeup that eliminates wheel rattle, and a streamlined cabinet that catches the customer's eye. And no installation headaches, either. What more could a dealer ask for?"

EARL A. STROUD,
Wysox, Pa.

Viking

AIR CONDITIONING CORP.
Cleveland 2, Ohio

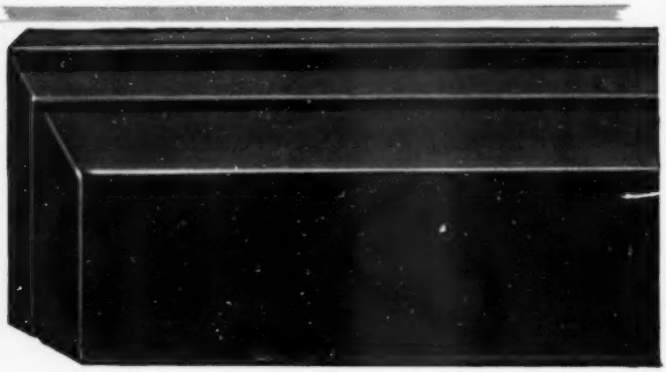



New
THE
TRULY
MODERN
WAY
TO
DIFFUSE
AIR
by TITUS

TITUS... Perimeter

NEW No. 100





APPROVED

*Leading architects and contractors have found that there is no substitute for the *great quality, high efficiency, low cost installation* and *dependability* of TITUS PERIMETER DIFFUSERS.

SO NEW... SO ADVANCED... ORDINARY REGISTERS JUST LOOK OLD FASHIONED BY COMPARISON. TITUS DIFFUSERS MAKE ANY HEATING OR COOLING SYSTEM MORE EFFICIENT... BECAUSE THEY DELIVER HEAT WHERE IT IS MOST NEEDED... BECAUSE THEY DIFFUSE AIR THE MODERN WAY.

REQUIRE ½ LABOR... ½ DUCT WORK OF ORDINARY INSTALLATIONS

Here is the first DIFFUSER to solve the problem of old style installations. Less trips to job. No roughing-in necessary. Diffuser slips easily onto boot. Needs no cutting into wall or plaster. Amazing savings can be realized on every job. Once you install TITUS DIFFUSERS you'll find you cannot afford to go back to old, slow, expensive installation practices.

FOR ANY TYPE WARM AIR HEATING JOB

Can also be used in old or new installations. Need not be confined to perimeter jobs.

BEAUTY THAT BLENDS WITH THE ROOM

TITUS DIFFUSERS are furnished with finish coat... no additional expensive painting required. Made of heavy duty 20 gauge steel to withstand floor level abuse.

GUARANTEED QUALITY

These competitively priced DIFFUSERS MEET AND BEAT competition price-wise, beauty-wise, product-wise.

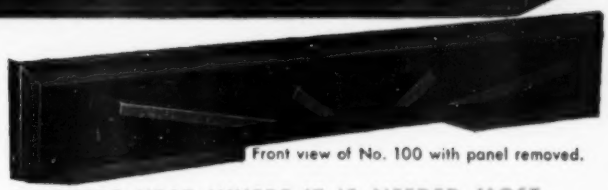
TITUS DIFFUSERS ARE AVAILABLE FOR IMMEDIATE SHIPMENT

most widely accepted Diffuser... today





Bottom view No. 100. Slots provide easy attachment to duct or boot. Note rugged construction which will withstand floor level use and abuse. Heavy duty 20 gauge steel.



Front view of No. 100 with panel removed.

CONTRACTORS ORDER A SAMPLE DIFFUSER NOW. Remember not until you have a sample TITUS DIFFUSER can you show your customers its *extra attractiveness, greater diffusing efficiency, superior construction.*

Also, not until you install this DIFFUSER can you see the great amount of labor and duct work SAVINGS possible.

DELIVERS HEAT WHERE IT IS NEEDED MOST

Four bevels direct air stream over both the entire outside wall and room proper, from floor to ceiling with 180° diffusion. Eliminate floor draft. Make house warmer with an even "blanket" of heat over wall. Eliminate *"Cold Film"* on outside walls.

NEW COMPLETE "QUICK SALES" DISPLAY PROMOTION KIT

FREE LITERATURE... WRITE TODAY

We're going all out to see that every contractor, dealer, wholesaler is GUARANTEED *EASIER DISPLAY, EASIER EXPLANATION, EASIER SALES* OF BOTH PERIMETER HEATING AND TITUS PERIMETER DIFFUSERS. THIS KIT WILL HAVE EVERYTHING YOU NEED TO DISPLAY AND SELL TITUS PERIMETER DIFFUSERS.

KIT INCLUDES:

1 Complete display unit (32″x6¼″x6″) with full size Titus Diffuser—showing how it is installed in model room.

2 25 Complete Diffuser Catalogs.

3 25 Informative Booklets on "Trends in Warm Air Heating."

THIS KIT is a $25.00 *value*. But it is given FREE with the purchase of 24 TITUS DIFFUSERS.

TITUS INCORPORATED **WATERLOO, IOWA**

Gentlemen: Please rush me:

- ☐ Booklet on TRENDS IN WARM AIR HEATING
- ☐ COMPLETE CATALOG ON PERIMETER DIFFUSERS and RETURN AIR GRILLES
- ☐ PACKAGE PLAN FOR 4, 5, 6, and 7 ROOM HOUSE
- ☐ HAVE A REPRESENTATIVE CALL AT ONCE
- ☐ 24 PERIMETER DIFFUSERS INCLUDING FREE "QUICK SALE" DISPLAY KIT.

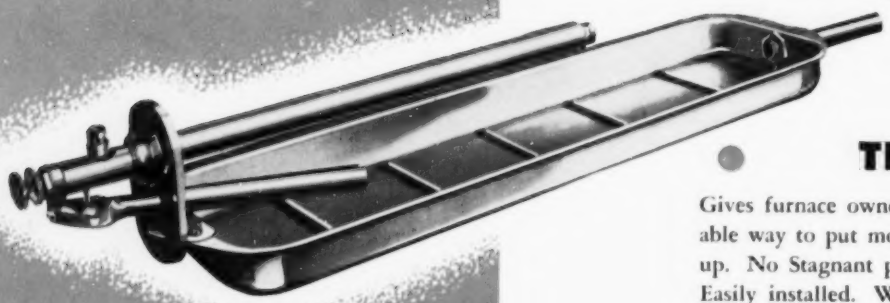
Name _____

Address _____

City _____ State _____

A TYPE and SIZE FOR EVERY WARM AIR FURNACE

AUTOMATIC HUMIDIFIER



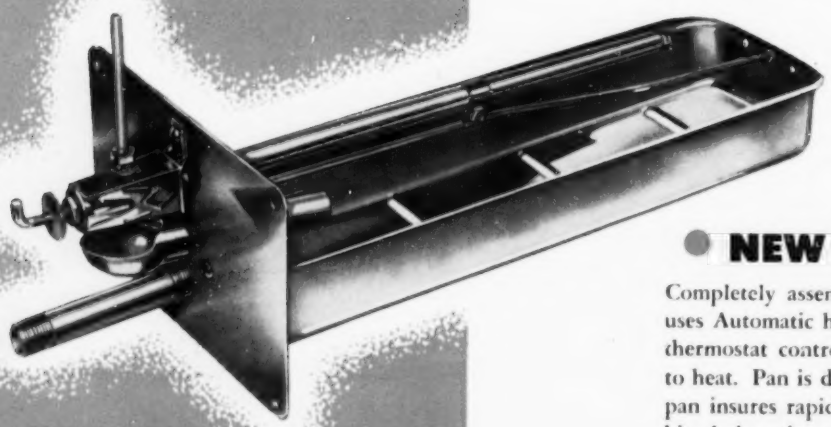
THERMO-DRIP

Gives furnace owners the most efficient, most dependable way to put moisture in the air. Valves don't lime up. No Stagnant pool to reheat. Sensitive thermostat. Easily installed. Water drips into pan only after pan is zizzling hot. This puts the most moisture into the air stream when it is most needed.



MODEL CF500 FOR COUNTER FLO FURNACES

Makes healthful humidified warm air available in homes with perimeter systems. Requires no pans to buy or install. Bottom of plenum chamber in concrete floor is evaporating surface. Drip feed automatically accelerates or shuts off as furnace temperature fluctuates. When furnace is not in use, plenum chamber is dry.



NEW VAPORITE NO. 555

Completely assembled for lowest cost installation . . . uses Automatic humidifier drip feed principle. Positive thermostat control feeds water to vapor pan according to heat. Pan is dry when furnace is cold. Stainless steel pan insures rapid heat transfer to water. One size, one kit slashes time and labor cost. New Model 577 also available for installation on slopping bonnet furnaces.

Write today for free literature on these four most efficient, most dependable humidifiers.

AUTOMATIC HUMIDIFIER COMPANY • • • CEDAR FALLS, IOWA

American Artisan

SHOW Section...



Chicago

January 26-30

Air Conditioning Exposition—11th International Heating & Ventilating Exposition . . . 59th Annual Meeting of The American Society of Heating and Ventilating Engineers

Quick Picture of the "Big Week"

ASHVE MEETING . . . . .

Technical sessions at 9:30 a.m. Monday, 9:30 a.m. and 1:30 p.m. Tuesday and Wednesday, and 9:30 a.m. Thursday at the Conrad Hilton. See program for full information.

EXPOSITION . . . . .

Opens Monday at 2 p.m. at the International Amphitheatre, and daily Tuesday through Friday at 12 noon. Closing hour is 10 p.m., except on Friday at 6 p.m. See list of exhibitors and diagrams of exhibit layout for full information on "who, what and where."

ON THE LIGHTER SIDE . . . . .

Ladies' luncheon and miniature grand opera at Kungsholm Restaurant, 12 noon to 4 p.m. Monday and Wednesday, with alternate tea and drama program at Conrad Hilton at 2 p.m. each of these days; informal party and get-together, 9 p.m. Monday at Conrad Hilton; ladies' tea and style show 3 p.m. Tuesday, Narcissus Room, Marshall Field & Co.; annual banquet at 7 p.m. Wednesday, Conrad Hilton.

Plan Biggest Meeting and Show

THE TIME OF THE ASHVE Annual Meeting has arrived once again. Within the next few days, engineers, educators, manufacturers, salesmen, contractors and representatives of government will gather in Chicago for the 59th Annual Meeting of The American Society of Heating and Ventilating Engineers. They will be attracted to the nation's second largest city by a common interest in the latest research and development in the fields of heating, ventilating and air conditioning.

The meeting is expected to attract some 3000 heating, ventilating and air conditioning men, their wives and guests from all over the United States and Canada. This will be a far cry from January 1895, when 45 pioneers in the field gathered in New York at the Society's first annual meeting.

Biggest Show Ever To Be Held

The 59th Annual Meeting of the ASHVE will be held in conjunction with the 11th International Heating, Ventilating, and Air Conditioning Exposition. With some 400 exhibitors taking part, this will be the largest show of its kind ever held.

The Exposition will be held at the International Amphitheatre and Chicago Convention Building and will open on Monday afternoon at 2:00 p.m. The show will feature an ASHVE exhibit, *Research At Work*, which will display some of the Society's cooperative and laboratory research projects. This will be in booth 2-325 located in the center of the second floor, and will have a dynamic demonstration of the physiological effects of environment, as well as demonstrations of shading effects on heat transmission through glass, heat radiation from ceiling panels, and the ASHVE low-resistance low-inertia heat flow meter. An information booth with a display of the Society's publications will be maintained on the main floor at booth 905.



Six Busy Technical Sessions

The Program and Papers Committee, under the chairmanship of Prof. E. R. Queer, State College, Pa., has prepared an interesting program of six technical sessions. Among the technical program's highlights (see page 150) are papers on physiological effects of environment, the calculation of friction heads for pipe lines, compression tank selection, odor control, heat from chimneys and fuel consumption analysis. There will be a session devoted to the problems of administering research programs, and an entire session with papers on friction and pressure losses in ducts and fittings and room air distribution. The closing sessions will cover floor panel control systems, heat exchanges in a panel heated room, the shading of sunlit glass, two papers on air velocities in jets, and summer cooling of a residence.

Following the technical papers at the Monday morning session, Dr. Preston Bradley, pastor of the People's Church, Chicago, will speak on the subject, *Today — Tomorrow and You.*

Excellent Program of Special Events

Under the direction of the Committee on Arrangements, headed by W. A. Kuechenberg and G. W. Bornquist, chairman and vice-chairman, respectively, an excellent program of special events has been planned.

On Monday night there will be a Get-Together party at the Conrad Hilton Hotel, featuring dancing and entertainment. The ladies committee has scheduled a round of activities for the fair sex, starting on Monday afternoon with a luncheon and miniature grand opera at the Kungsholm Restaurant. This event will be repeated on Wednesday for those unable to attend on Monday and, as an alternative on either day, a Tea and Drama Program is planned at the hotel. Tuesday afternoon will feature a Style Show and Tea at Marshall Field and Co. In addition, the committee has obtained tickets for several radio shows for the use of members' wives and their guests.

The meeting will be climaxed by the Annual Banquet on Wednesday; it will be highlighted by an address, *This Freedom Of Ours*, by Nathaniel Leverone, Chicago industrialist and civic leader. C. M. Burnam, Jr., of Chicago, will be toastmaster. The F. Paul Anderson Medal will be awarded to E. N. McDonnell, and the Past President's Emblem will be presented to Ernest Szekely.

The Old Timers' Club of the oil burner industry will relax the evening of January 27 at the Furniture Club.

How To Get To Exposition

In addition to using cabs and special busses direct from downtown hotels to the International Amphitheatre, public transportation facilities are also convenient.

By subway —Take southbound subway train on State St., and change at Indiana Ave. for stockyards. Get off at Halsted St. and walk a short block south to the Amphitheatre.

By CTA bus — Take bus marked "Racine and 87th" southbound on State St. direct to the Amphitheatre at Halsted and 43rd St.

By CTA streetcar — Take southbound No. 36 State St. car to 43rd St., transfer to westbound "43rd-Halsted" car to Halsted St., walk short distance south.

By automobile — Go south on Michigan Ave. to 39th St., turn right to go west on 39th to Union Ave., turn left to go south on Union Ave. to Root St., and turn right to go west on Root to the Amphitheatre. . . Another route is to go south on Michigan to 43rd St., and turn right to go west on 43rd to the Amphitheatre, which is on Halsted. . . Another route is to go south on Canal St. to Archer Ave., turn half-right to go southwest on Archer to Union Ave., turn half-left to go south on Union Ave. to Root St., and turn right to go west on Root to Halsted. There is ample parking space back of the Amphitheatre.

Committee on Arrangements for ASHVE Meeting

W. A. Kuechenberg, *General Chairman*
G. W. Bornquist, *Vice Chairman*

Honorary Chairmen
H. M. Hart — S. R. Lewis — A. C. Willard

Banquet Committee — H. G. Chapin, *Chairman;* C. M. Burnam, Jr., C. A. Imming, P. J. Marschall, R. T. Murphy, E. E. Sundeen, J. F. Tobin.

Entertainment Committee — J. S. Kearney, *Chairman;* W. H. Brackett, G. B. Coffey, A. L. Crump, W. F. Christmann, J. A. Dell, F. E. Moran, H. B. Ross, Henry Seetch, W. A. Stahl, H. G. Swart.

Finance Committee — G. G. Freyder, *Chairman;* H. E. Anderson, H. J. Couch, T. L. Smith.

Ladies Committee — Mrs. G. W. Bornquist, *Chairman;* Mmes. M. J. Bamond, C. M. Barnes, M. W. Bishop, C. M. Burnam, Jr., H. G. Chapin, J. F. Cummiskey, G. G. Freyder, H. G. Gragg, T. V. Johnson, J. S. Kearney, Herbert Kreisman, W. A. Kuechenberg, P. J. Marschall, J. H. Milliken, W. G. Pennington, C. E. Price, G. V. Zintel.

Plant Inspection Committee — C. M. Barnes, *Chairman;* John Gazlay, C. A. Gustafson, F. W. Kramer.

Publicity Committee — T. V. Johnson, *Chairman;* E. G. Avery, M. J. Bamond, S. F. Rost.

Reception Committee — H. G. Gragg, *Chairman;* Herbert Kreisman, *Co-Chairman;* M. J. Bamond, Thomas Cranage, A. L. Crump, L. P. Lang, G. A. Mansinger, R. D. Misch, O. A. Moran, W. G. Pennington, J. J. Philippi, J. C. Scott, L. H. Streb, F. W. Thompson, W. F. Christmann.

Sessions Committee — J. F. Cummiskey, *Chairman;* Norman Bueter, A. M. Bladen, Thomas Cranage, E. H. Gage, N. A. Gregornik, M. F. Koster, Sydney Miner, J. C. Scott, L. H. Streb, E. E. Sundeen, E. R. Teske, R. W. Van Valzah.

Illinois Chapter Officers

President	M. W. Bishop
Vice President	H. G. Chapin
Treasurer	G. G. Freyder
Secretary	G. V. Zintel

Board of Governors

C. M. Barnes — G. W. Bornquist — Herbert Kreisman — H. G. Gragg

Advisory Committee for the Exposition

Representation on the advisory committee of the Exposition is shared by the ASHVE — sponsoring society — and a number of engineering societies and trade associations in related fields. Ernest Szekely, president of the ASHVE, is chairman of the group. Other members representing functional and territorial interests of the Society are: Reg. F. Taylor, first vice president, ASHVE; M. K. Fahnestock and John W. James, members of the Council; I. W. Cotton, chairman, Committee on Research; S. R. Lewis and A. C. Willard, past presidents; M. W. Bishop, president, Illinois Chapter; H. R. Limbacher, president, Western Michigan chapter; John A. Lofte, president, Wisconsin Chapter; W. A. Kuechenberg, general chairman, 59th annual meeting. Also, J. M. Frank, B. H. Jennings, F. P. Keeney, Dr. R. W. Keeton, and L. G. Miller.

Representatives of the cooperating groups are the following committeemen: William B. Henderson, executive vice president, Air Conditioning & Refrigerating Machinery Association; William B. Watterson, president, Air Filter Institute; Charles E. Bennett, president, American Gas Association; Carrol A. Farwell, president, American Institute of Consulting Engineers; Edward Simons, president, American Society of Refrigerating Engineers; F. W. Earnest, Jr., president, Anthracite Institute; Andrey A. Potter, president, Bituminous Coal Research, Inc.; William M. Murray, Jr., president, Heating, Piping & Air Conditioning Contractors National Association; R. E. Ferry, general manager, Institute of Boiler and Radiator Manufacturers; Charles M. Gray, manager, Insulation Board Institute; R. A. Wasson, president, National Association of Fan Manufacturers; W. D. Redrup, president, National Warm Air Heating and Air Conditioning Association; T. A. Crawford, president, Oil-Heat Institute of America; R. A. Locke, president, Steel Boiler Institute; L. C. Dubs, president, Stoker Manufacturers Association; Ovid W. Eshbach, president, Western Society of Engineers.

Program
59th Annual Meeting

The American Society of Heating and Ventilating Engineers
The Conrad Hilton Hotel January 26-29, 1953 Chicago, Illinois

(All meetings at the Conrad Hilton unless designated otherwise)

SATURDAY — JANUARY 24

9:30 a.m. TAC ON INSULATION, M. W. Keyes, *Chairman (Private Dining Room 19)*

10:00 a.m. FINANCE COMMITTEE, J. W. James, *Chairman (Private Dining Room 20)*

10:00 a.m. STANDARDS COMMITTEE, L. N. Hunter, *Chairman*

1:30 p.m. EXECUTIVE COMMITTEE, L. E. Seeley, *Chairman (Private Dining Room 20)*

2:00 p.m. ADMISSION AND ADVANCEMENT COMMITTEE, A. W. Edwards, *Chairman (Private Dining Room 12)*

3:00 p.m. TAC ON AIR CLEANING, A. B. Algren, *Chairman (Private Dining Room 3)*

SUNDAY — JANUARY 25

10:00 a.m. REGISTRATION

10:00 a.m. COUNCIL MEETING *(Private Dining Room 1)*

10:00 a.m. 1952-53 COMMITTEE ON RESEARCH *(Private Dining Room 4)*

3:00 p.m. TAC ON INSULATION, M. W. Keyes, *Chairman (Private Dining Room* 12)

MONDAY — JANUARY 26

9:00 a.m. REGISTRATION

9:30 a.m. FIRST TECHNICAL SESSION *(Grand Ballroom)* Pres. Ernest Szekely presiding

Call to Order

Reports of Officers and Council

A Comparison of Physiological Adjustments of Clothed Women and Men to Sudden Changes in Environment, by Tohru Inouye, F. K. Hick, M. D., R. W. Keeton, M.D., J. Losch, Nathaniel Glickman

Two Methods of Calculating Friction Heads for Pipe Lines, by F. E. Giesecke

11:00 a.m. Greetings by M. W. Bishop, President, Illinois Chapter

Response by Pres. Ernest Szekely

Address by Dr. Preston Bradley, Chicago. *Subject:* "Today — Tomorrow and You"

11:30 a.m. LADIES LUNCHEON AND MINIATURE GRAND OPERA (12 noon to 4:00 p.m.) *(Kungsholm Restaurant)* Bus leaves Michigan Ave. & 8th St.

12:30 p.m. COUNCIL LUNCHEON *(Saddle and Sirloin Club)*

1:30 p.m. CHAPTERS' CONFERENCE *(Private Dining Room 1)*

2:00 p.m. EXPOSITION — Opening of 11th International Heating, Ventilating and Air Conditioning Exposition

2:00 p.m. LADIES TEA AND DRAMA PROGRAM *(North Ballroom)*

2:00 p.m. TAC ON THE HEAT PUMP, E. P. Palmatier, *Chairman (Private Dining Room* 9)

2:00 p.m. TAC ON INDUSTRIAL ENVIRONMENT, W. N. Witheridge, *Chairman (Private Dining Room* 4)

2:00 p.m. TAC ON PANEL HEATING AND COOLING, P. B. Gordon, *Chairman; Groups A, B* and *D (Private Dining Room 2)*

3:00 p.m. GUIDE COMMITTEE, B. H. Jennings, *Chairman (Private Dining Room* 3)

9:00 p.m. INFORMAL PARTY AND GET-TOGETHER *(Grand Ballroom)*

TUESDAY — JANUARY 27

9:00 a.m. REGISTRATION

9:30 a.m. SECOND TECHNICAL SESSION *(Grand Ballroom)* First Vice Pres. Reg F. Taylor presiding

Report of Tellers of Elections

Compression Tank Selection for Hot Water Heating Systems, by H. A. Lockhart and G. F. Carlson

The Bacteria and Odor Control Problem in Occupied Spaces, by R. L. Kuehner

Heat Transmitted to the I-B-R Research Home from the Inside Chimney, by W. S. Harris and R. J. Martin.

Fuel Consumption Analysis for Multi-Family Housing Projects, by Rutcher Skagerberg and J. E. Phifer

10:00 a.m. TAC ON AIR DISTRIBUTION, G. B. Priester, *Chairman* (*Private Dining Room* 10)

10:00 a.m. TAC ON HEAT FLOW THROUGH GLASS, R. A. Miller, *Chairman* (*Private Dining Room* 9)

12:00 noon TAC ON HOT WATER AND STEAM HEATING, J. W. James, *Chairman* (*Private Dining Room* 5)

1:30 p.m. THIRD TECHNICAL SESSION (*Grand Ballroom*) Second Vice Pres. L. N. Hunter presiding

Research Administration Symposium

Participation by Colleges in Research, by E. A. Walker

Government Sponsored Research — A Canadian View, by R. F. Legget

Industrial Research in the Control of Environment, by W. H. Kliever

2:00 p.m. TAC ON COMBUSTION, T. H. Smoot, *Chairman* (*Private Dining Room* 3)

2:00 p.m. TAC ON COOLING LOAD, W. E. Zieber, *Chairman* (*Private Dining Room* 4)

2:30 p.m. TAC ON SOUND AND VIBRATION CONTROL, by H. A. Lockhart, *Chairman* (*Private Dining Room* 6)

3:00 p.m. LADIES TEA AND STYLE SHOW (Marshall Field & Co.—*Narcissus Room*, 7th Floor)

7:00 p.m. PAST PRESIDENTS' DINNER

7:00 p.m. TAC ON HEATING LOAD, W. S. Harris, *Chairman* (*Private Dining Room* 3)

7:30 p.m. COMMITTEE ON CODE FOR TESTING AND RATING HEAVY DUTY FURNACES, E. K. Campbell, *Chairman* (*Private Dining Room 12*)

WEDNESDAY — JANUARY 28

9:00 a.m. REGISTRATION

9:30 a.m. FOURTH TECHNICAL SESSION (*Grand Ballroom*) Pres. Ernest Szekely presiding

Friction Losses in Round Aluminum Ducts, by F. W. Hutchinson

Pressure Losses in 4-Inch Diameter Galvanized Metal Duct and Fittings, by H. G. Conn, W. G. Colborne, and W. G. Brown

Pressure Loss Characteristics of Small Diameter Round Duct Systems, by G. R. Whitnah and J. V. Borry

Room Air Distribution Research for Year 'Round Air Conditioning—Part I, Supply Outlet at One High Side Wall Location, by S. F. Gilman, H. E. Straub, A. E. Hershey, and R. B. Engdahl

10:00 a.m. TAC ON SORPTION, G. L. Simpson, *Chairman* (*Private Dining Room* 6)

11:30 a.m. LADIES LUNCHEON AND MINIATURE GRAND OPERA (12 noon to 4:00 p.m.) (*Kungsholm Restaurant*) Bus leaves Michigan Ave. & 8th St.

1:30 p.m. FIFTH TECHNICAL SESSION (*Grand Ballroom*) First Vice Pres. Reg F. Taylor presiding

Report of Committee on Research, by I. W. Cotton, Chairman

Field Studies of Floor Panel Control Systems, by A. B. Algren, E. F. Snyder, Jr., and J. S. Locke

Heat Exchanges in a Ceiling Panel Heated Room, by L. F. Schutrum, G. V. Parmelee and C. M. Humphreys

The Shading of Sunlit Glass—An Experimental Study of Slat-Type Sun Shades, by G. V. Parmelee, W. W. Aubele, and D. J. Vild

2:00 p.m. LADIES TEA AND DRAMA PROGRAM (*North Ballroom*)

3:00 p.m. NOMINATING COMMITTEE, M. W. Bishop, *Chairman*

7:00 p.m. ANNUAL BANQUET (*Grand Ballroom*)

Toastmaster—C. M. Burnam, Jr., Chicago

Speaker—Nathaniel Leverone, Chicago. *Subject*—"This Freedom of Ours"

Presentation of Past President's Emblem to Ernest Szekely, Milwaukee

Presentation of F. Paul Anderson Medal to E. N. McDonnell, Chicago

THURSDAY — JANUARY 29

9:00 a.m. REGISTRATION

9:30 a.m. SIXTH TECHNICAL SESSION (*Grand Ballroom*) Second Vice Pres. L. N. Hunter presiding

Maximum Downward Travel of Heated Jets from Standard Long Radius ASME Nozzles, by Linn Helander, Shee-Mang-Yen, and R. E. Crank

Air Velocities in Ventilating Jets, by G. L. Tuve

Cooling a Small Residence with a Two Horsepower Mechanical Condensing Unit, by H. T. Gilkey, D. R. Bahnfleth, and R. W. Roose

Installation of Officers

Resolutions

Adjournment

12:00 noon 1953-54 COMMITTEE ON RESEARCH (organization meeting) (*Private Dining Room* 9)

1:30 p.m. COUNCIL MEETING (*Private Dining Room 10*)

FRIDAY — JANUARY 30

12:00 noon EXPOSITION—11th International Heating, Ventilating and Air Conditioning Exposition (International Amphitheatre). Closes at 6 p.m. ASHVE Booths Nos. 905 and 2-325



Ernest Szekely
President



Reg F. Taylor
First Vice President



Louis N. Hunter
Second Vice President



J. Donald Kroeker
Treasurer



W. A. Kuechenberg
General Chairman



G. W. Bornquist
Vice Chairman



Dr. Preston Bradley
Speaker, First Session

ASHVE
59TH
ANNUAL MEETING



Nathaniel Leverone
Banquet Speaker

January 26-29, 1953



C. M. Burnam, Jr.
Toastmaster, Banquet

Conrad Hilton Hotel



M. W. Bishop
President
Illinois Chapter



H. G. Chapin
Chairman
Banquet



G. G. Freyder
Chairman
Finance



G. V. Zintel
Secretary
Illinois Chapter

EXPOSITION EXHIBITORS AND THEIR EXHIBITS

HERE ARE THE names of the exhibitors who are scheduled for the 11th Air Conditioning Exposition — the International Heating & Ventilating Exposition, per latest advice at press time from the exposition management. Those listed with information on the products they will exhibit and the names of representatives who will be in attendance furnished these details direct to the publisher. With the booth numbers and the accompanying diagrams of the exhibit hall, each exhibitor is easily located.

The exposition is under the management of the International Exposition Co., Charles F. Roth, manager, E. K. Stevens, associate manager.

(See layout of exhibit hall on pages 156 and 157)

A-J MFG. CO., 2119 Washington St., Kansas City 8, Mo.—Booth 906

In attendance: Arthur S. Hurt, Jr., Ernest S. Preuitt, M. E. Hurt.

Exhibiting: Complete line of no-vision door and partition grilles; heating and air conditioning diffusers; registers and grilles. Thin core no-vision grille for ¼ in. to ¾ in. partition, and perimeter diffusing floor register, will be featured.

A-P CONTROLS CORP., 2450 N. 32nd St., Milwaukee 45, Wis.—Booths 1107, 1109.

In attendance: R. W. Johnson, D. Moerick, T. J. Melville, R. W. Sloane, R. A. Simpson, A. A. Schubert, H. J. Welch, B. T. Carroll, J. F. Cowan, J. W. Hall, F. J. Marshall, R. E. Morton, A. L. Neva, R. E. Petersen, N. C. Port, L. C. Thompson, H. D. Youmans, D. G. Tmey, A. L. Topp, F. O. Kovich, S. A. Johnson.

Exhibiting: Oil and gas controls; refrigeration controls; model 240 MT-YS comfort control; Model 50 water heater "Gasapack"; and model 54 comfort snap control will be featured.

ACE ENGINEERING CO., 1435 W. 15th St., Chicago 8, Ill.—Booth 427

In attendance: I. L. Schurman, J. W. Cowan, R. W. Linden, R. W. Bardach, Jr., A. F. Jelenc, A. Eckstein, S. Padove, H. G. Fovell.

Exhibiting: "Uniflow" horizontal rotary oil burners and combination oil-gas burners. "Unipak" combination oil-gas burner with factory built and tested panel board, will be featured.

ACME INDUSTRIES, INC., 600 N. Mechanic, Jackson, Mich.—Booths 1134, 1136, 1138

In attendance: K. A. Weatherwax, G. L. Baldwin, P. A. Weatherwax, E. B. Dunphy, A. B. Newton, C. W. Millsom, D. G. Merrill, H. W. Smith, J. T. Maloney, R. C. Deeg, R. L. Fisher, K. D. Cunningham, R. T. Hansen, W. H. Armstrong, G. V. Mercer, E. A. Morrison, W. E. Lloyd.

Exhibiting: "Flow-Temp" heat pump; "Flow-Temp" remote room conditioner; "Dry-Ex" water chiller; package water chiller; cooling towers; heat exchangers; oil separators; shell and tube and shell and coil condensers. Operating heat pump system will be featured.

ACRO MFG. CO.—see CRISE CONTROLS DIV.

AIR CONTROL PRODUCTS, INC., Coopersville, Mich.—Booth 2-124

In attendance: Robert L. Leigh, Kenneth L. Babcock, Winston A. Clark, R. C. Hackenbruch, Claude E. Denton, Donald E. Stoll, Elmer G. Biele, Paul K. Schneider.

Exhibiting: Registers, grilles, diffusers, perimeter registers, ventilators. New line of perimeter diffusers will be featured.

AIR CONTROLS, INC., DIV. OF CLEVELAND HEATER CO., 2310 Superior Ave., Cleveland 14, Ohio—Booth 442

In attendance: B. G. Krause, N. Busch, O. A. Harris, J. F. Brainard, Paul R. Jett, Arthur E. Friedman.

Exhibiting: Air conditioning blowers; furnace blowers; blower filter units; propeller fans; attic fans; window fans. 20 in. belt driven window fan will be featured.

AIR DEVICES INC., 17 E. 42nd St., New York, N. Y.—Booths 1310, 1312, 1314

In attendance: C. N. O'Day, G. J. Sweeney, T. A. Hughes, P. G. Daves, J. M. Day, Jr., C. A. Eades.

Exhibiting: "Agitair" air diffusers, air filters, grease filters, exhausters, dampers, "Flexitrols". Type RC air diffusers with removable core, "Stripline" diffusers, and new instruments for measuring air velocities used in balancing air conditioning systems will be featured.

AIR-MAZE CORP., 5200 Harvard Ave., Cleveland 5, Ohio—Booths 1211, 1213

In attendance: W. B. Watterson, N. L. Lamprecht, J. D. Thomas, E. M. Paullin, J. M. Clem.

Exhibiting: Viscous impingement panel type air filters and electric air filters.

AIRTEMP DIV., CHRYSLER CORP., 1600 Webster St., Dayton 1, Ohio—Booth 734

AIRTHERM MFG. CO., 700 S. Spring Ave., St. Louis 10, Mo.—Booth 1220

In attendance: N. B. Barsha, W. C. Brandau, F. P. Kohlbry, Ray O. Reeves.

Exhibiting: Convector radiators, gas fired unit heaters, propeller fan type steam unit heaters, blower fan type steam unit heaters, oil or gas direct fired space heaters, 650,000 to 2,000,000 Btu per hr output capacity. Gas fired unit heaters, redesigned convector radiators, and redesigned propeller fan steam unit heaters will be featured.

ALDRICH CO., 105 Williams St., Wyoming, Ill.—Booths 424, 426

In attendance: P. M. Stephenson, E. L. Fox, B. Mulder.

Exhibiting: "Heat-Pak" "B" series and Gulf Stream "C" series boiler-burner units (oil and gas fired), high pressure conversion oil burners. New competitively priced package boiler-burner units that are pre-wired, accessory equipped, ready to set in place and connect will be featured. There are five sizes, 440 to 1120 sq ft net water radiation, to cover the heating and domestic hot water needs of small and medium sized homes.



ALLEN-BRADLEY CO., 136 W. Greenfield Ave., Milwaukee 4, Wis.—Booths 2-108, 2-112

In attendance: H. Rosenkranz, L. M. Perkins J. McC. Price, D. L. Anderson, K. E. Gorder, C. T. Roy, H. Julien, J. J. Mellon, Jr., J. Clagett.

Exhibiting: Line of industrial motor control, including motor starters and accessories, many types of pressure and temperature controls.

ALLIS-CHALMERS MFG. CO., 1126 S. 70th St., Milwaukee 1, Wis.—Booths 516, 518

In attendance: Robert N. Brown, Walter Meyer, M. L. Murdock, O. V. Talley, J. C. Collier.

Exhibiting: Small motors; controls, "Texrope" drives, small pumps.

AMERICAN AIR FILTER CO. INC., 215 Central Ave., Louisville 8, Ky.—Booths 735, 737

In attendance: John Hellstrom, Harry Noles, James May, Irving Clark, Robert Walker, John Willis, Charles Wright, Arthur Miller.

Exhibiting: Electronic precipitators ("Electromatic", "Electro-Cell"); electronic air filters ("Electro-PL"); air filters ("Multi-Duty," "PL-24," "American HV," "American MW," "Deep Bed," "Amer-glas"). New model of self-cleaning "Electro-Cell" will be exhibited for the first time, and an animated display explaining efficiency ratings by different methods for various classes of filters will be featured.

AMERICAN AIR FILTER CO. INC.—also see HERMAN NELSON PRODUCTS

AMERICAN ARTISAN, 6 N. Michigan Ave., Chicago 2, Ill.—Booth 425

In attendance: Frank P. Keeney, Charles E. Price, Wallace J. Osborn, Robert A. Jack, George C. Cutler, James D. Thomas, C. M. Burnam, Jr., Clyde M. Barnes, Robert J. Osborn, Frank S. Easter, James E. Sacra, David V. Mahan.

Exhibiting: American Artisan, technical books, market data.

AMERICAN BLOWER CORP., 8111 Tireman, Detroit 32, Mich.—Booth 714

Exhibiting: Propeller fan; kitchen fans; steam and hot water unit heater; gas fired unit heater; heavy duty steam coil; air conditioning unit; utility blower. Power roof ventilator will be featured.

AMERICAN COILS CO., 360 Thomas St., Newark 5, N. J.—Booths 2-209, 2-213, 2-215

AMERICAN DISTRICT STEAM CO., INC., Bryant St., North Tonawanda, N. Y.—Booth 2-236

In attendance: John L. McGara, Arthur H. Sy, James G. Kintner, Joseph J. Maurin, Thomas C. McCarthy, Alan C. Spitzer, William H. Worth.

Exhibiting: Expansion joints, both packless and slip type; heat exchangers; steam traps; strainers; separators; gas pressure regulators; rotary condensate meter; "Corruflex" packless

expansion joint, and a wide variety of packless expansion joints developed within the last year — and which require no maintenance (swing joint, universal joint, balanced joint, gimbal joint) — will be featured. An operating hinge-joint installation will also be a feature of the "Adsco" display.

AMERICAN FURNACE CO., 1300 Hampton Ave., St. Louis 10, Mo.—Booth 2-204

In attendance: Charles H. Franke, Russell Archibald, Howard Carlson, Robert Meigs.

Exhibiting: Warm air heating and summer air conditioning equipment.

AMERICAN GILSONITE CO., 1145 E. Jersey St., Elizabeth, N. J.—Booth 2-530

In attendance: John F. Williams, A. P. Dowler, E. F. Goodner.

Exhibiting: "Gilsulate", a new method of insulating and corrosion protection for underground steam pipe lines.

AMERICAN HYDROVAC, DIV. OF PITZ FOUNDRY, INC., 290 Scholes St., Brooklyn 6, N. Y.—Booths 2-418, 2-420

In attendance: A. C. Hauser, Robert M. Pitz, Robert G. Pitz, J. Pedersen, J. B. Whittaker.

Exhibiting: Vacuum pumps; "Spacemiser" and other condensate pumps; boiler feed unit with cast iron tank; "Hydrovac" exhauster. Boiler feed unit with cast iron receiver, awarded first prize for design by Gray Iron Founders' Society, will be featured.

AMERICAN IRON AND STEEL INSTITUTE —see COMMITTEE ON STEEL PIPE RESEARCH

AMERICAN MACHINE & METALS, INC.—see DeBOTHEZAT FANS DIV.

AMERICAN RADIATOR & STANDARD SANITARY CORP., P. O. Box 1226, Pittsburgh 30, Pa.—Booths 708, 714, 715, 815

Exhibiting: "Mohawk" winter air conditioner; "Mayfair" summer air conditioner; "Magnefilter" air cleaner; "Seneca" winter air conditioner; "Winterway" winter air conditioner; "Winterglo" winter air conditioner; "Navaho" floor furnace; "Pawnee" winter air conditioner; "Wyandotte" winter air conditioner; "Empire" boiler; "Arcoliner" wet base boiler; "Sanflame" gas conversion burner; "Arcoflame" oil conversion burner; "Budget" water heater; "Heatrim" panels; "Radiantrim" panels; "Sunra" radiator; new multifin convector; "Remotaire" room conditioner.

AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS, Headquarters, 62 Worth St., New York 13, N. Y.—Booth 905. Research Laboratory, 7218 Euclid Ave., Cleveland 3, Ohio.—Booth 2-525

In attendance: Representatives from ASHVE Research Laboratory, and a physiologist and a technician from the University of Illinois.

Exhibiting: A dynamic demonstration of the physiological reactions of clothed humans to sudden changes in environment; ASHVE low-inertia, low-resistance heat flow meter; effect of shading on heat transmission through glass; heating by means of radiant panels. Exhibit will demonstrate the so-called "shock effect" studies. Two air conditioned booths will be used. The condition in one booth will be that of a comfort air conditioned space, and that in the other one will simulate a hot-humid street on a summer day. A human subject in typical summer attire will spend a certain amount of time in each condition, and then pass from one to another as people do during the summer months. Suitable instrumentation will show on charts the changes in skin temperatures at various points on the body as the person passes from one environment to the other. Medical doctors and physiologists will explain the changes and their significance.

AMERICAN SOLVENT RECOVERY CORP. — see PUR AIR DIV.

ANCHOR DIV., STRATTON & TERSTEGGE CO. INC., 300 Culbertson St., New Albany, Ind.—Booths 2-715, 2-717

In attendance: J. L. Meagher, E. J. Fackler, Ed Clifford, J. W. Oeffinger, Bob Adams.

Exhibiting: Stokers; oil burners; gas conversion burners; furnaces; boilers; furnace pipe.

ANDERSON CO., V. D., 1935 W. 96th St., Cleveland 2, Ohio.—Booths 917, 919

In attendance: Wm. J. Gleason, Jr., Bruce R. Wright, Michael J. Toth, R. J. Grill, W. P. Nevins.

Exhibiting: Steam traps; strainers; air release valves; purifiers. Working model of a new purifier will be featured.

ANEMOSTAT CORP. OF AMERICA, 10 E. 39th St., New York 16, N. Y.—Booth 614

In attendance: C. M. Wilson, R. F. Hayes, F. Honerkamp, A. J. Devitt, W. F. Peters, U. F. Sela.

Exhibiting: Air diffusers; high velocity units; "Anemotherm" air meters.

ANTHRACITE INSTITUTE, 101 Park Ave., New York 17, N. Y.—Booths 1309, 1311, 1313, 1315, 1317, 1321

In attendance: Gordon M. Campbell.

Exhibiting: Anthracite stokers, stoker boiler and furnace units; "Anthratubes" for residential use and commercial crossfeed anthracite stokers and an "Anthra-Hearth" fireplace grate.

APRIL SHOWERS CO., INC.—see AQUA-SOLAR ENGINEERING

AQUA-SOLAR ENGINEERING AND APRIL SHOWERS CO., INC., 2620 S. 9th Ave., Maywood, Ill.—Booth 2-314

In attendance: Daniel Wright, William Syverson, D. L. Knoll, Albert Haron, Leonard H. Holder.

Exhibiting: Automatic roof cooling systems and spray heads; Automatic controls; "Muellermist" underground lawn sprinkling systems; residence-air cleaned heads humidity auxiliary control will be featured.

ARMSTRONG FURNACE CO., 851 W. 3rd Ave., Columbus 8, Ohio—Booths 1301, 1302

In attendance: D. H. Kinnan, L. G. Hickok, W. J. Olsen, H. C. Gallcher, Charles Brooks, P. Y. Matthews, T. M. Gallagher, Robert Tolliver, Ross Huntington, Carl Bryson, H. G. Hays, J. R. Swinehart, F. R. Vaughn, George Zimbelman.

Exhibiting: Warm air heating and winter air conditioning equipment for gas and oil firing; central cooling equipment; oil and gas burners. Counterflow and horizontal gas and oil furnaces for perimeter heating and small pipe systems, and cooling equipment in 2, 3 and 6 ton packages, featuring hermetically sealed compressor units, will be shown.

ARMSTRONG MACHINE WORKS, Mapie St., Three Rivers, Mich.—Booth 2-425

In attendance: A. E. Armstrong, T. H. Rea, O. E. Ulrich, T. M. Reed, Chas. Daugherty.

Exhibiting: Steam traps; steam humidifiers; forced circulation hot water heating control. Working models of steam traps and humidifiers will be featured.

ATLANTIC PIPEBENDING & FABRICATING CORP., 552 River Rd., Edgewater, N. J.—Booth 929

In attendance: S. H. Nitzberg, J. H. Macaulay, A. Semonchik.

Exhibiting: Pipe bends; "Ray-Flo" valves.

ATLANTIC STEEL BOILER CO., INC., 22nd St. & Washington Ave., Philadelphia 46, Pa. —Booth 2-104

In attendance: John C. Barnes, R. K. Barnes, Joseph A. Greway, Harry H. Hellerman, Philip J. Miller, Paul J. Thompson, E. F. Kuehl, A. A. Redderson.

Exhibiting: Fire tube and water tube boilers.

AUER REGISTER CO., 6600 Clement Ave., Cleveland 5, Ohio—Booth 2-137

In attendance: George R. Metzger, Herbert F. Curtis, Allen H. Bechtel, F. Joseph Butler.

Exhibiting: Complete line of registers and grilles for the heating, ventilating and air conditioning industry.

AU-TEMP-CO CORP., 520 Broadway, New York 12, N. Y.—Booth 908

In attendance: Albert Fowler, Edward J. Zeitlin, Lee Leighton.

Exhibiting: Electronic indoor-outdoor heating control; motorized valves. New oil immersed valve control motor will be featured.

AUTO-FLO CORP., 13526 Fenkell, Detroit 27, Mich.—Booth 2-541

In attendance: M. Perlman, D. Sutherland, V. Vogel, J. Perlman, W. Gift, H. Burke, J. Miner.

Exhibiting: Automatic humidifiers.

AUTOMATIC DEVICES CO., INC., 714 Hillgrove Ave., Western Springs, Ill.—Booth 534

In attendance: H. T. Kucera, O. W. Dobson, F. L. Thuemling, E. Barta.

Exhibiting: "Weather-Man" control of building heating from outdoors; "Weather-Flo", indoor-outdoor control of building heating; "Weather-Chron," a weather actuated day-night time switch; "Model A Weather-Flo," an indoor-outdoor control with balancing room temperature effect. New regulator which modulates for variations of indoor temperatures due to solar heat, cooking, fireplace heat or excessive body heat input will be featured. It is adjustable on the job to existing conditions.

AUTOMATIC FIRING CORP., 4417 Oleatha Ave., St. Louis 16, Mo.—Booths 308, 310, 312, 314

In attendance: James J. Lee, F. J. Hollerbach, W. M. Gonzenbach, E. A. Kuhn, J. Van Dillen.

Exhibiting: "Gas-A-Fire" gas conversion burners and forced warm furnaces; "Oil-A-Fire" oil conversion burners and forced warm furnaces; "Dual-A-Fire" dual fuel (gas and oil) conversion burners and forced warm air furnaces; "Cool-A-Matic" room air conditioners, and packaged air conditioners; "Frigd-A-Fire" combination heating and cooling units. 1953 models of room coolers, and combination heating and cooling unit with air cooled condenser, eliminating use of water entirely, will be featured.

AUTOMATIC HUMIDIFIER CO., 19th & Main St., Cedar Falls, Ia.—Booth 2-115

In attendance: J. W. Galloway, L. W. Reining, W. E. Simpson, H. H. Galloway.

Exhibiting: "Thermo-Drip" and "Vaporite" humidifiers No. 555 and No. 577 humidifier package unit and No. CF-500 humidifier assembly for counterflow furnaces will be featured.

AVCO MFG. CORP.—see CROSLEY DIV.

AXEMAN-ANDERSON CO., 233 West St., Williamsport 3, Pa.—Booths 1309 to 1321

In attendance: Gordon M. Campbell.

Exhibiting: "Anthratube",

BACHARACH INDUSTRIAL INSTRUMENT CO., 7301 Penn Ave., Pittsburgh 8, Pa.—Booth 1346

In attendance: Members of sales and engineering service departments.

Exhibiting: Testing instruments for heating and

air conditioning, including "Fyrite" combustion testing kits, vaporizing burner adjusting kit, and instruments for balancing heating systems. Included in the latter group are "Tempscribe" temperature and operation recorders, "Florite" direct reading velocity meter, and a sling psychrometer. Combustion testing kits and special purpose instruments for gas burner adjustments will be featured.

BAHNSON CO., 1001 S. Marshall St., Winston-Salem, N. C.—Booths 522, 524, 526

In attendance: A. H. Bahnson, Jr., H. J. Haslam, R. M. Anderson, H. W. Reid, H. S. Kelley, R. C. Schneider, F. C. Evans, C. R. Long, A. R. Close.

Exhibiting: Complete line of industrial humidification and air conditioning equipment. On display will be unit humidifiers, pneumatic atomizers, humidity controls, and various components for industrial air conditioning systems. On operating display will be a new self-contained industrial humidifying unit developed for automatic control of humidity in all types of commercial and industrial spaces, and which may be used as a complete humidification system, for spot humidification, for boosting existing systems, and for precise humidity control in laboratories and test chambers.

BAKER REFRIGERATION CORP., South Windham, Maine—Booths 2-306, 2-308

In attendance: Mark E. Mooney, W. C. Rehor, J. L. Bodine, C. N. Bellm, O. A. Pfaff, E. H. Burge, A. M. Reilly, Donald Parkhurst.

Exhibiting: 7½ hp store air conditioner; ¾ hp room air conditioner; 25 ton packaged water chiller.

BALDOR ELECTRIC CO., 4353 Duncan Ave., St. Louis 10, Mo.—Booth 2-133

In attendance: David Halliday, Edward Mahle, Paul Travers, Fred Baliman, E. W. Bruce.

Exhibiting: Complete line of totally enclosed "Stream Cooled" motors from 1 to 15 hp inclusive; precision bench grinders. New line of unit heater and air conditioning motors in ratings of 1/20 to ½ hp inclusive will be featured. In reduced frames, it is called the "Baltric" line.

BALTIMORE AIRCOIL CO., INC., 2615-35 Mathews St., Baltimore 18, Md.—Booth 939

In attendance: John Engalitcheff, Jr., Ray R. Forseille, R. W. Pentecost, A. M. Norris, M. K. Kok.

Exhibiting: Scale models of line of evaporative condensers and cooling towers which are factory assembled and require no job erection other than rigging into place and piping and wiring.

BARBER-COLMAN CO., 1300 Rock St., Rockford, Ill.—Booth 508

In attendance: C. J. Braatz, C. P. Yates, E. A. Greenlee, M. J. Bamond, W. G. Young, D. L. Dittloff, J. E. Wright; A. J. Arnold, L. C. Plaehn, H. E. Shugars.

Exhibiting: Automatic control and air distribution products — outdoor reset hot water controls; "Econostat"; proportioning controls; electronic humidity controls; industrial combustion equipment; sidewall and ceiling type air distribution equipment. High pressure air distribution equipment and electronic humidity controls will be featured.

BARKOW MFG. CO., INC., AUG. G., 2230 S. 43rd St., Milwaukee 15, Wis.—Booth 2-1012

In attendance: August G. Barkow, C. E. Melcher, Ray McGarry.

Exhibiting: 2 ton residential air conditioning unit; 3 ton commercial air conditioning unit. Self contained, sealed, residential air conditioning unit for use with warm air furnaces will be featured.

BARNES & JONES, INC., 128 Brookside Ave., Boston 30, Mass.—Booth 1242

In attendance: John B. Hogan, Carl W. Larson, Norman J. Shaw, Eric Lund, Walter E. Barnes.

Exhibiting: Radiator valves; thermostatic traps; float and thermostatic traps; trap replacement units; zone control heating systems.

BELGIAN ELECTRIC SALES CORP., 1 E. 53rd St., New York 22, N.Y.—Booth 2-313

BELL & GOSSETT CO., 8200 N. Austin Ave., Morton Grove, Ill.—Booths 1207, 1209

In attendance: E. J. Gossett, R. E. Moore, C. E. Pullum, R. A. Patterson, W. A. Boone, H. A. Lockhart, W. S. Clough, George Bornquist, Frank C. Hackett, and others.

Exhibiting: "B&G Hydro-Flo" forced hot water heating, industrial and refrigeration products; "B&G" boosters; indirect water heaters; "Flo-Control" valves; "Airtrol" fittings; comfort control valves and relief valves; "B&G" industrial and refrigeration equipment, including centrifugal pumps and heat exchangers. Exhibit will feature applications of forced hot water heating to all types of buildings, including small homes, widely separated garden apartments, and multi-story structure. New products will include small, light, high efficiency boosters, and centrifugal pumps with mechanical seal.

BETT-MARR MFG. CO.—see House & Co., T. S.

BEVERLY SHEAR MFG. CO., 3004 W. 111th St., Chicago 43, Ill.—Booth 2-307

In attendance: Kurt W. Nebel, R. J. Nebel, George K. Nebel, Robert L. Christensen, Stanley J. Kalish, Alice L. Arkell, Frances M. Nebel.

Exhibiting: Throatless shears; slitters; inside slotter; and cable cutter. Rod cutter will be featured.

BINKS MFG. CO., 3114-40 Carroll Ave., Chicago 12, Ill.—Booth 2-125

In attendance: C. R. Kranz, A. G. Stacy, James Doherty, Alfred Jeslee, Ronald Kumataka.

Exhibiting: Cooling towers, industrial spray nozzles, and related heat exchange equipment. Small compact cooling tower for residence air conditioning, complete with blower and pump, for refrigeration capacity of 2 to 5 tons, and other towers from 10 to 100 tons and up, will be featured.

BOILER ENGINEERING & SUPPLY CO., INC., Manavon St., Phoenixville, Pa.—Booth 2-141

In attendance: R. E. Burke, R. E. Emrich, J. Hohenleitner, W. Palm, W. B. Riley.

Exhibiting: "Continental" automatic boiler.

BORG-WARNER CORP.—see NORGE HEAT DIV.

BOSTON MACHINE WORKS CO., 7 Willow St., Lynn, Mass.—Booth 2-140

In attendance: Ralph L. Dennis, I. M. Nelson, Tony Torrisi, H. C. Walters, Lars Schulein, Burt Vickery, Howard Nunnally, Fred Bottiger.

Exhibiting: "Apthorp" nozzle; "Clearview" tank gage; "Ideal" nozzle extractor; "Boston-Standard" draft control; "BosMaco-Apthorp" nozzle kit; "Hang-down" baffle; "Instant-Glo" combustion chambers; "Boston Breeze" burner; and featuring "Boston" head and "Wigwam" flue cap.

BROWN PRODUCTS CO., 97-12 Metropolitan Ave., Forest Hills, N. Y.—Booths 933, 935

In attendance: A. Brown, J. Aronczyk, S. Rosenthal, H. Hansen, J. R. Younger, J. A. Murphy.

Exhibiting: Baseboard radiation, fin tube radiation, convectors and unit heaters. Heating and air conditioning unit will be featured.

BRUNDAGE CO., 512 N. Park St., Kalamazoo 11, Mich.—Booth 2-304

In attendance: H. F. Brundage, F. W. Brundage, J. E. Brundage, W. A. Rockafield, H. A. Austin, Lou Reining, Bruce McLouth, Bert Moncrief, Harold Winningham, Howard Nunnally, Fred Bottiger, Walter Briggs, Joseph Babush, Ed Zieve.

Exhibiting: Direct drive blower; furnace blower assembly; blower exhauster; blower-filter package unit.

BRUNNER MFG. CO., 1821 Broad St., Utica, N. Y.—Booths 2-209, 2-213, 2-215

In attendance: Frank C. Hawk, Pete Hatcher, J. Junkin, J. Reid, J. Lyons, B. Menard, L. B. DeMarsh, B. Haldeman.

Exhibiting: Small refrigeration compressors and condensing units; large refrigeration condensing units; two stage refrigeration condensing units; water chillers; self contained air conditioners (business and residential); "Ice Builders." New "Brunner-Metic" semi-hermetic condensing units, 2 ton residential type air conditioner to install in conjunction with new or present warm air furnaces, "Ice Builder," and water chiller will be featured.

BUFFALO FORGE CO., 490 Broadway, Buffalo, N. Y.—Booths 201, 202

In attendance: C. C. Cheyney, R. T. Thornton, R. P. Warren, S. M. Trumbo, E. P. Heckel, J. W. Kipphut, F. B. Stubinger, J. E. Gill, R. D. Madison, K. R. Berggren, R. Jorgensen, F. J. Debus, W. H. Holt.

Exhibiting: New ventilating fan; industrial exhaust fan; pressure blower; vaneaxial fan; new "Diamond Jubilee Breezo" fan; horizontal type "PC" conditioning cabinet; 4 in. double suction single stage pump; new 16 in. "Breezo" disk fan; new 24 in. "Belt-Air" disk fan. Conditioning cabinet will have transparent top so that parts can be seen.

BUFFALO PUMPS, INC.—see BUFFALO FORGE CO.

BUILDERS-PROVIDENCE, INC., 345 Harris Ave., Providence 1, R. I.—Booth 1344

In attendance: Fred W. Deutsch, Robert M. Gwynne, Winthrop W. Adams, G. E. Riepe.

Exhibiting: "Shuntflo" steam meter; new design model AFQUA "Flo Watch" for liquids, steam, air or gas; Venturi insert nozzles and orifice plates. The new "Flo Watch" is an adaptation of a line of instruments in which economies have been effected by redesigning. It will accurately meter liquids, steam, air or gas when used in conjunction with a venturi insert nozzle, venturi tube or orifice plate. The newly designed "Shuntflo" is a tool for metering steam or air, enables saving operational steam cost, balancing steam systems, controlling departmental heating, measuring steam output in process work, and keeping efficiency records of steam producing units. It will also accurately meter manufactured or natural gas.

BUNDY TUBING CO., 8109 E. Jefferson Ave., Detroit 14, Mich.—Booths 1333, 1335

In attendance: A. F. Bernthal, Robert Ireland Warren Kendall, P. A. O'Connell.

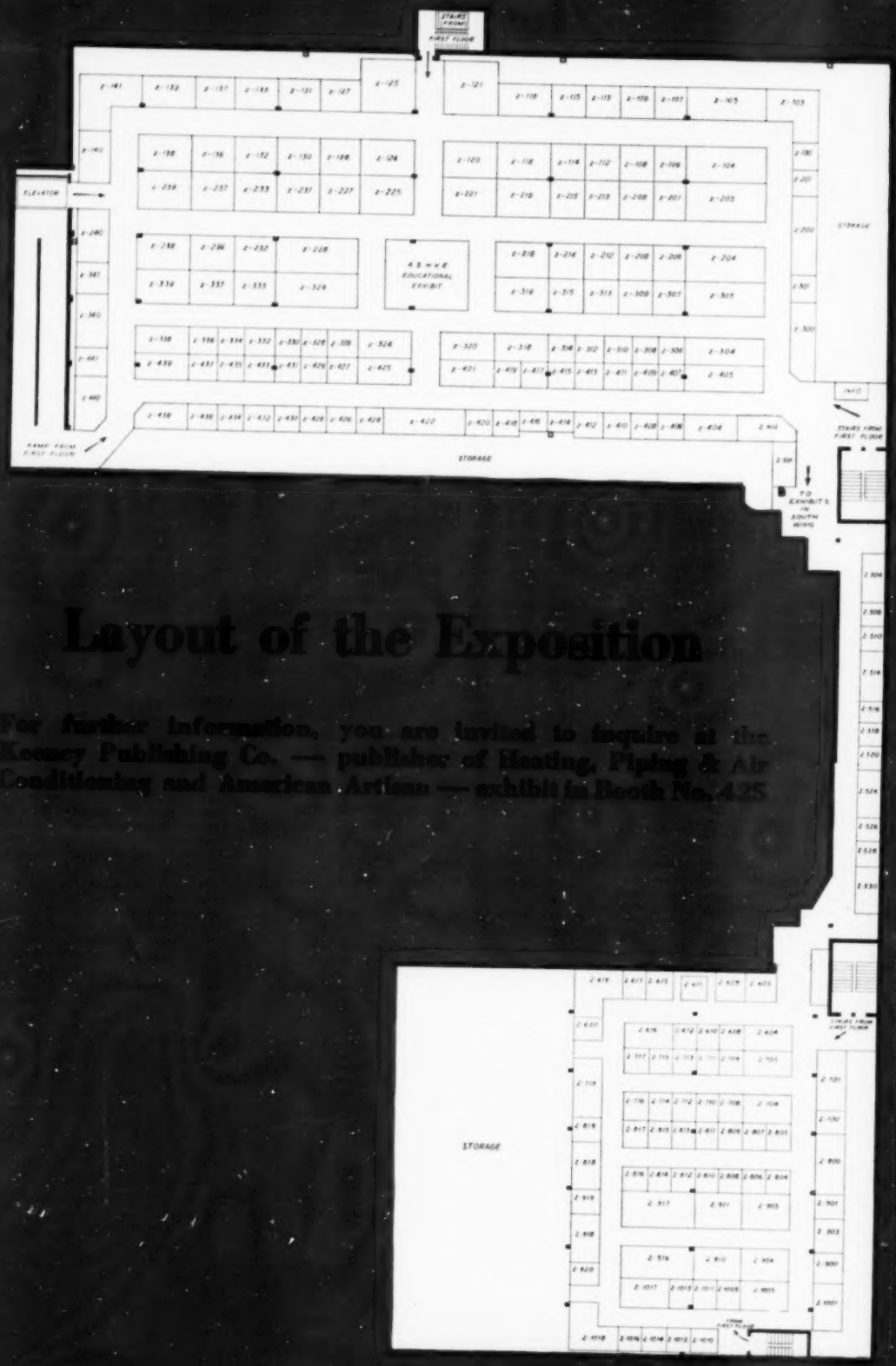
Exhibiting: "Bundyweld" steel tubing for ceiling radiant heating.

BURDETT MFG. CO., 3433 W. Madison St., Chicago, Ill.—Booth 2-903

In attendance: Procter Brevard, Robert Cuff.

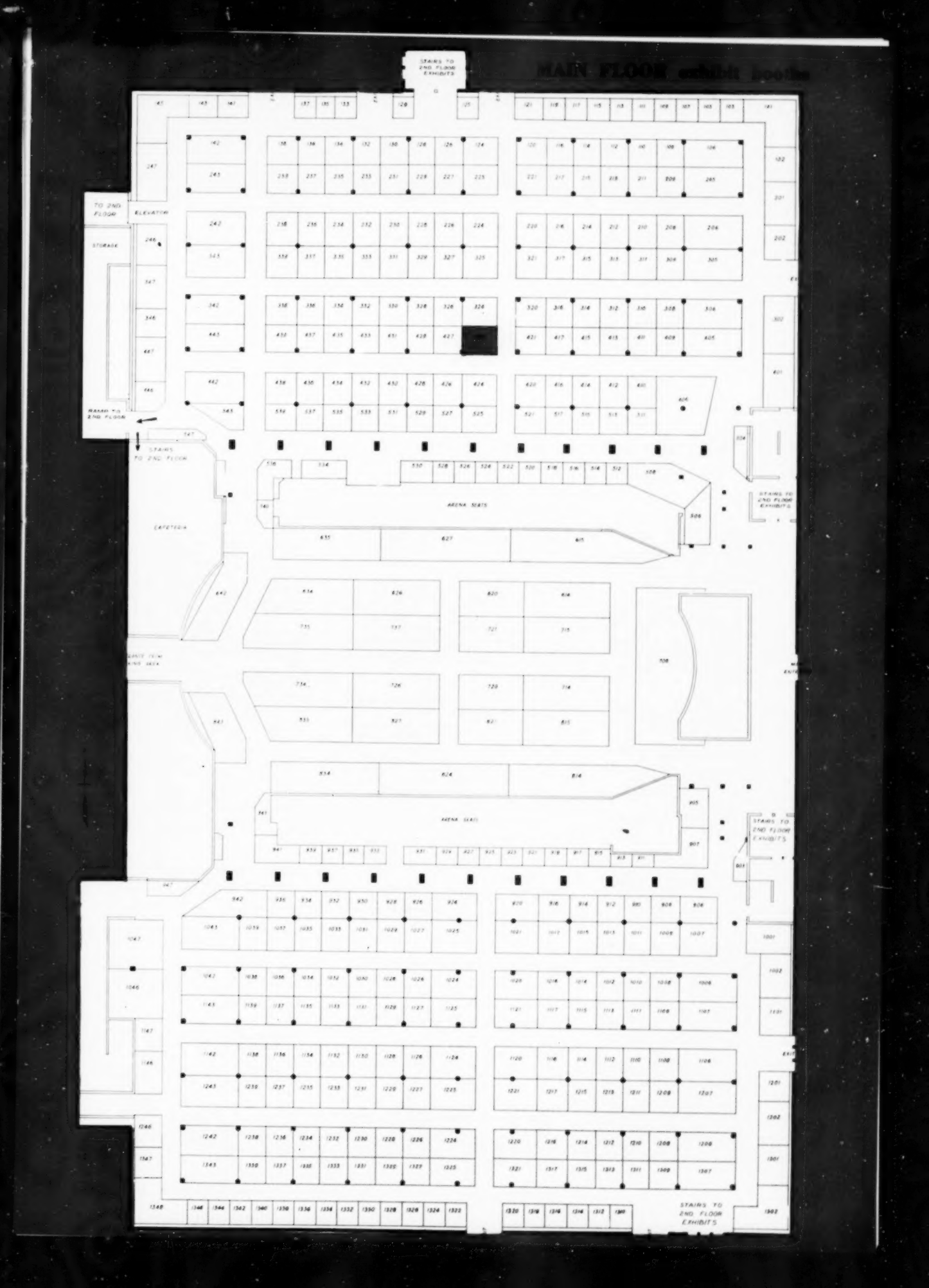
Exhibiting: "Radiant Heat" power burner (100,000 to 200,000 Btu per hr); "Upshot" type atmospheric burner (80,000 Btu to 180,000 Btu per hr); "Junior Upshot" burner (50,000 to 125,000 Btu per hr); "Heat Tower" atmospheric burner (100,000 to 160,000 Btu per hr); "Junior Heat Tower" burner (50,000 to 125,000 Btu per hr). Unique method of obtaining "a maximum amount of usable radiant heat and convected heat coupled with maximum combustion efficiency" will be featured.

SECOND FLOOR exhibits



Layout of the Exposition

For further information, you are invited to inquire at the Keeney Publishing Co. — publisher of Heating, Piping & Air Conditioning and American Artisan — exhibit in Booth No. 425


MAIN FLOOR exhibit booths
STAIRS TO 2ND FLOOR EXHIBITS
TO 2ND FLOOR ELEVATOR
STORAGE
RAMP TO 2ND FLOOR
STAIRS TO 2ND FLOOR
CAFETERIA
ARENA SEATS
STAIRS TO 2ND FLOOR EXHIBITS
ARENA (EAST)
STAIRS TO 2ND FLOOR EXHIBITS
STAIRS TO 2ND FLOOR EXHIBITS

BURGESS-MANNING CO., Architectural Products Div., 5970 Northwest Highway, Chicago 31, Ill.—Booth 2-700

In attendance: D. W. Day, Sherman J. Larsen, Warren C. Kadow, Albert T. Jorn, J. G. Baran.

Exhibiting: Radiant heating, radiant cooling, acoustic control ceiling. Exhibit will feature radiant heating panels and radiant cooling panels in operation.

BURNHAM CORP., Boiler Div., Irvington, N. Y.—Booths 1036, 1038

In attendance: F. R. Brophy, V. A. Good, D. W. Stevens, H. N. Jones, W. Enochs, R. Green, R. Henderson, R. W. Fowler, R. Eisbrenner.

Exhibiting: "Hy-Power Mode-Baseray" radiant baseboards; radiant radiator; "Pacemaker" oil boiler and oil heating unit; "Yello-Jkt." oil boiler and oil heating unit; "P B" series gas boiler. Gas boiler and "Super" tankless built-in water heaters with capacities for from one to five baths will be featured.

BUSH MFG. CO., 179 South St., West Hartford 10, Conn.—Booths 126, 128

In attendance: Cecil Boling, E. M. Flannery, F. T. Carney, J. A. Mulcahey, J. K. Campbell, B. Prather, H. Theis, J. Sheperdson, George Finck, H. L. Quinn, Joe E. Parker.

Exhibiting: Air handling units, water cooling tower, and steam coils, and featuring baseboard radiation, convectors, and industrial fin tubing and covers.

CAREY MFG. CO., PHILIP, Lockland, Cincinnati 15, Ohio—Booth 2-440

Exhibiting: "Careyduct"; industrial insulations—"Tempcheck"; "Careycel", MW50. Nonmetallic duct for all purposes will be featured.

CARNES CO., W. R., S. Main St., Verona, Wis.—Booth 2-336

In attendance: W. R. Carnes, Roger Whiting, F. A. Freese, Robert Trollen, John Frosch.

Exhibiting: Ceiling air diffusers, power roof ventilators.

CARRIER CORP., 302 S. Geddes St., Syracuse 1, N. Y.—Booths 227, 229, 231, 233

CARVER PUMP CO., Muscatine, Ia.—Booth 105

CENTURY ELECTRIC CO., 1806 Pine St., St. Louis 3, Mo.—Booth 1225

In attendance: R. N. Hill, G. C. Henderson, F. Powers, A. Neher, L. H. Downing, Geo. Nafe, G. E. Moe, R. L. Biller, H. McInerney.

Exhibiting: Complete line of motors used in the heating and ventilating field. New three speed fan motor will be introduced. A demonstration unit illustrating insulation process will also be shown. A home workshop motor is to be given away each day of the show.

CENTURY ENGINEERING CORP., 401 Third St., S. E., Cedar Rapids, Ia.—Booth 827

In attendance: B. J. Lattner, W. S. Moellering, J. O. Rosche, Charles Walker, Ace Mellott, R. F. Considine, Harold Potter, Thos. R. Bridge, James Hastie, M. F. Keiderling.

Exhibiting: Oil fired winter air conditioners, basement type and "Hiboys"; oil fired counterflow units; gas fired counterflows; gas fired winter air conditioners, basement and "Hiboy" types; oil and gas gravity furnaces; oil fired hot water boilers; oil fired domestic hot water heaters (pressure gun type burner); conversion oil burners; conversion gas burners; air washer-humidifiers. New oil and gas counterflow approved by AGA and Underwriters' Laboratories for zero clearance and installation on combustible floors, and air washer-humidifier that can be installed in almost any make of oil or gas basement type furnace, will be featured.

CERTIFIED FURNACE CO., 1000 Berry Ave., St. Paul 4, Minn.—Booth 2-105

In attendance: M. W. Bowen, D. C. Rupp, J. C. Stroud, H. E. Hansen, C. W. Byrum, S. T. Carlsen, R. H. Pentecost, C. E. Nelson.

Exhibiting: Coal, oil and gas fired all steel winter air conditioning units. New "Bonus Built" line of oil fired all steel winter air conditioning units will be featured.

CHACE CO., W. M., 1600 Beard Ave., Detroit 9, Mich.—Booth 346

CHAR-GALE MFG. CO., 4325 Hiawatha Ave., Minneapolis 6, Minn.—Booths 108, 110

In attendance: L. C. Johnston, C. L. Johnston, N. J. Dovolis, Jess Bratsch, Joe LaTuff, Harley Sipprell, George S. Standen, R. W. Thorne, Earl R. Johnston.

Exhibiting: Aluminum air conditioning and heating ducts, fittings, pipe and ells, registers, vents, and humidifiers. "Gale-Aire" 4½ in. small pipe system, together with register combination, will be displayed under actual operating conditions.

CHELSEA FAN & BLOWER CO., INC., 639 South Ave., Plainfield, N. J.—Booth 1006

In attendance: George J. Read, James B. Hebert, William J. Lohman, Jr., William J. Lohman, Sr., Eugene W. Lohman.

Exhibiting: Duct booster fans; air blasters; mancoolers; power roof ventilators; industrial fans; attic fans. Window fans and room air conditioners will be featured.

CHICAGO BLOWER CORP., 9867 Pacific Ave., Franklin Park, Ill.—Booth 1307

In attendance: F. H. Gohl, V. Launspach, W. Swain, T. W. McManus.

Exhibiting: Turbo-pressure blower; steel plate exhauster; multi-blade exhauster; "Gyra-Flo" roof exhauster; "Axial-flo" roof exhauster; axial airfoil propeller fan; ventilating set. New airfoil bladed type backwardly curved centrifugal fan, with efficiencies in excess of 90 percent, a steep pressure characteristic curve and a low noise level rating will be featured.

CHICAGO PUMP CO., 622 Diversey Pkway., Chicago 14, Ill.—Booth 835.

In attendance: G. D. Bers, Milton Spiegel, H. E. Martin, A. R. Kral, John C. Redmond, William Hanley, Jerry Lettvin, Dave Boyell, John L. Alexander, William Allan, S. F. Resan, Edwin C. Anderson, E. J. Anderson, Roger D. Anderson, Hugh C. Boisclair, Robert E. Bragg, E. C. Cooley, Jr., J. W. Cherry, F. E. Baird, L. S. Gilbert, Vance A. Morrow, H. M. Ludlow, J. M. MacCrea, A. A. Maycock, R. D. Elgin, Henry L. Pelouze, B. G. Arnold, D. R. Rippey, R. K. Rothrock, James A. Scherer, C. F. Sexton, Paul R. Jarratt, Harry B. Hoffman, Louis B. Hoffman, F. X. Loeffler, Sr., J. J. Heilman, A. L. Vanderhoof.

Exhibiting: Complete line of circulating pumps for air conditioning and building water systems; complete line of pumps for every type of heating service; sewage ejectors and bilge pumps.

CHRYSLER CORP.—see AIRTEMP DIV.

CLARAGE FAN CO., Kalamazoo, Mich.—Booths 1028, 1030

In attendance: R. A. Wasson, S. H. Downs, C. R. McConner, C. O. Fury, T. Cranage, J. W. Muessig.

Exhibiting: Industrial exhaust fan (700 F construction); ventilating unit (ready-to-run type); high speed ventilating fan.

CLAYTON & LAMBERT MFG. CO., 1701 Dixie Highway, Louisville 10, Ky.—Booth 2-240

In attendance: Wm. M. Pace, R. J. Miller, John B. Henderson, Claude F. Forbes, William Yeager.

Exhibiting: "Lamneck" furnace pipe and fittings; storage type water heaters; "C & L" torches and tinners furnace. Exhibit will feature first showing of automatic storage water heaters being manufactured for distribution through the heating and ventilating trade.

CLEAVER-BROOKS CO., 326 E. Keefe Ave., Milwaukee 12, Wis.—Booths 2-119, 2-121

In attendance: H. F. Holtz, E. D. Langley, E. H. Pollnow, F. A. Hopp, R. J. Tutsch, T. P. Dyke, F. W. Kramer, D. E. Kress, E. P. Homa, J. V. Resek, W. DeMuth, Howard McCoy, Frank Wymbs, T. M. Walczak, Cyril Meenan, K. Carhart.

Exhibiting: 80 hp "Model LR" boiler; "HEV-E" gas and oil burner equipment.

CLEVELAND HEATER CO.—see AIR CONTROLS, INC. DIV.

COAL-O-MATIC CO., Trucksville, Pa.—Booths 1309, 1311, 1313, 1315, 1317, 1321 (Anthracite Institute exhibit)

In attendance: Paul L. Gross, Edw. T. Nahill.

COLEMAN CO., INC., 250 N. St. Francis, Wichita 1, Kans.—Booths 1106, 1108.

In attendance: Sheldon Coleman, C. L. Burrows, L. M. Marks, Jess Moore, A. W. Boyer, F. W. Richards, Jack Kice.

Exhibiting: Air conditioning (heating and cooling), two new lines; "Blend-Air" warm air furnaces for use with 3½ in. small pipe system or conventional duct system; new line of six gas-fired wall heaters; floor furnaces, both gas and oil fired models; "Vit-rock" lined gas and oil fired water heaters; gas and oil fired space heaters. Premier showing of new 20 min sound color film, "The Trend Everywhere", will be featured as will "Vu-Graph" presentation of nationwide trend survey to determine preferences in design and air conditioning of small homes.

COLE-SEWELL ENGINEERING CO., 2288 University Ave., St. Paul 14, Minn.—Booth 103

In attendance: E. W. Laudert, Richard Sabor, H. J. Sewell.

Exhibiting: Draft controls, "Laund-R-Vents."

COLUMBIA BURNER CO., 729 Ewing St., Toledo 7, Ohio—Booths 230, 232

In attendance: Arnold A. Muenzer, R. J. Krutsch.

Exhibiting: Complete line of gas conversion burners for domestic and commercial use; gas designed "Conditioneer" furnaces; gas gravity furnaces. Gas furnaces of gravity and forced air type and a new conversion burner with air cushioned flame will be featured.

COMBUSTION CONTROL CORP., 720 Beacon St., Boston 15, Mass.—Booths 538, 540

In attendance: L. D. Sibley, P. K. Ryder, P. P. Foglio, H. C. Christiansen, R. W. Crawford, A. Lovendahl.

Exhibiting: "Fireye" flame failure safeguard controls for both manually ignited and automatic gas, oil or combustion gas-oil burners; smoke indicating equipment. Manual and automatic burner system used with new "Firetron" scanner, which sees all flames and eliminates need for photoelectric and flame rod scanners, will be featured.

COMBUSTIONEER DIV., STEEL PRODUCTS ENGINEERING CO., 1205 W. Columbia St., Springfield, Ohio—Booths 1327, 1329, 1331

In attendance: J. W. Albright, C. S. Overcashier, R. F. Kissell, Wm. A. Sayler, Del Getz, P. H. Chamberlain, H. E. Gahnz, Georges Roudanez, O. J. Puckett, C. P. Meredith, R. Hedges, E. M. May, A. F. Ludolph, Frank Doyle, John McCarthy, M. H. Collins, R. L. Tabb, J. H. Lavin.

Exhibiting: Low pressure oil burner; high pressure oil burner, conversion gas burner; gas

furnace, oil furnace; bin feed and hopper stokers; humidifier. Exhibit will feature first showing of new two-stage, self-purging low pressure oil burner, and there will be a plastic working model of new two-stage fuel pump.

COMMERCIAL FILTERS CORP., 2 Main St., Melrose 76, Mass.—Booth 324

In attendance: J. R. Chisholm, R. L. Fielding, H. C. Corwin, H. A. Wilson, P. R. Matravers.

Exhibiting: Filters for home and industrial heating oils, for the distribution of petroleum products and for the clarification of boiler water. A featured item will be a demonstration of the manner in which a standard oil burner model of "Fulflo" filter can be connected in a simple manner to any boiler for a steam or hot water system to give boiler water "of crystal clarity," thereby increasing thermal efficiency by preventing formation of heat wasting scale and in many cases eliminating objectionable water-hammer.

COMMITTEE ON STEEL PIPE RESEARCH, AMERICAN IRON & STEEL INSTITUTE, 350 5th Ave., New York 1, N. Y.—Booth 924

In attendance: George D. Lain.

Exhibiting: Steel pipe. Its use in radiant heating and snow melting installations will be featured.

CONCO ENGINEERING WORKS, P. O. Box 111, Mendota, Ill.—Booths 1229, 1231

In attendance: J. W. Burch, F. C. Lenihan, J. A. Howarth, R. W. Corbett, R. W. Conkey, W. G. Van Etten, R. W. McKenzie, W. G. Momeny, D. L. Bader, A. B. Carlson, O. R. Schmidt, R. E. Schmielau, R. I. Garland, J. H. Rutishauser, J. W. Osgood, W. A. Schultz, J. T. Wells, Herman Kleckner, F. J. Blotch, A. J. Krenz, L. A. Page, Lee Davignon, Roy H. Case, C. A. Carlson, Harry O. Donnelly, Dan Lynch, Steve Rilling, Walter R. Fresne, Harold A. Fresne, George H. Hosmer, E. A. Phillips, R. J. Mulholland, W. F. Hirsch, Paul Oehler, Vic Page, Orville L. Lobb, Miles A. Towne, R. Harry Crabtree, H. D. Conkey.

Exhibiting: Oil and gas fired warm air heating equipment — forced air and gravity; conversion burners. Furnaces will include counterflows, hi-boys and lo-boys. Summer and winter complete conditioning equipment will be featured.

CONDENSATION ENGINEERING CORP., 3511 W. Potomac, Chicago 51, Ill.—Booth 916

In attendance: Wayne Limbert, B. A. Johnson, Tom Jones, Walt Aschliman, Bob Wasson, George Anderson.

Exhibiting: "Vitroliner" prefabricated chimneys and chimney lining pipe.

CONGRESS DRIVES DIV., TANN CORP., 3750 E. Outer Drive, Detroit 34, Mich.—Booth 330

In attendance: Stuart Chosid, Otis L. Johnson, Albert C. Dueweke.

Exhibiting: Pulleys, V-belts, shaft collars, clutches.

CONNOR ENGINEERING CORP., Danbury, Conn.—Booths 208, 210

In attendance: J. H. Bartol, H. A. Baker, T. L. Smith.

Exhibiting: "Dorex" air recovery systems; "Kno-Draft" commercial and industrial air diffusers; "Kno-Draft" residential air diffusers for overhead heating and year 'round home conditioning. High pressure type equipment (air diffusers) together with new residential air diffusers for year 'round home conditioning will be featured.

CONTINENTAL AIR FILTERS, INC., 2520 Helm St., P. O. Box 1647, Louisville, Ky.—Booths 112, 114.

In attendance: Wm. K. Gregory, Frank B. Johnston, Jr., John A. Taylor, Jr., S. S. Emison, Ray L. Craig, Willis S. Veirs, L. P. Bryant.

Exhibiting: Automatic self-cleaning air filters; "E-Z-Wash" cleanable unit filters.

COOLERATOR CO., 128 W. 1st St., Duluth 1, Minn.—Booth 2-609

COPELAND REFRIGERATION CORP., Sidney, Ohio—Booth 843

In attendance: H. E. Thompson, F. J. Gleason, O. H. Buschmann, C. L. Curtis, W. G. Von Meyer, R. G. Berg, D. H. Bodine, F. E. Jernberg, A. E. Cadwell.

Exhibiting: Refrigerating units and compressors for air conditioning systems. "Copelametic" units and motor compressors through 7½ hp will be featured.

CORY CORP., 221 N. La Salle St., Chicago 1, Ill.—Booth 2-918

CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.—Booths 212, 214, 216, 220

In attendance: E. Allen, E. Cole, G. L. Erwin, Jr., G. G. Lindholm, H. J. Wulf, H. J. Stift, W. D. Howard, C. E. Towner, C. A. Stauber, D. A. Brown, W. G. Kehm, H. H. Simmons, J. L. Holloway, W. A. Burbine, C. T. Pollock, J. A. Dwyer.

Exhibiting: Gas and oil fired boilers; oil and gas fired furnaces for basement and ground level installation; gas fired unit heaters; individual room air conditioner; cast iron convector and standard type baseboard radiation; valves and fittings. A vertical type gas fired downflow ranch house furnace which lends itself to installations in small utility rooms and utility closets, and an operating baseboard radiation display demonstrating the fast heat pickup and moderate operating temperature, will be featured.

CRISE CONTROLS DIV., ACRO MFG. CO., 2040 E. Main St., Columbus 16, Ohio—Booth 2-510

In attendance: F. P. Maxwell, F. G. McCloskey, E. V. Bishoff, M. S. Feltz, John Stranberg, Thomas A. Smith, Al Unetic.

Exhibiting: Fan and limit controls for gas, oil and coal fired equipment; zone control system; automatic damper regulator set for hand fired furnaces; motors for louver operation. New line of "Surfastat" fan and limit controls and new zone control system will be featured.

CROSLEY DIV., AVCO MFG. CORP., Cincinnati, Ohio—Booth 2-405

CURTIS REFRIGERATING MACHINE DIV., 1905 Kienlen Ave., St. Louis 20, Mo.—Booths 234, 236, 238, 335, 337, 339

In attendance: H. J. Nettler, N. H. Behrend, M. P. Moeller, M. A. C. Weber, F. J. Hanley, K. T. Rockey, G. C. Helde, J. E. Mead, Mason Emanuels, K. E. Schneider, V. P. Warren, C. L. Angell, H. K. Hecker, H. J. Kipp, H. C. Morrison.

Exhibiting: Packaged air conditioning units; commercial condensing units. Special unit designed for use with warm air furnace as used in home, window type air conditioning units, and liquid petroleum gas transfer units will be featured.

CUTLER-HAMMER, INC., 315 N. 12th St., Milwaukee 1, Wis.—Booths 2-704, 2-708

DAFFIN MFG. CO., Lancaster, Pa.—Booth 2-1010

In attendance: B. W. Dickinsen, P. A. Herr, G. E. Sprackling.

Exhibiting: Humidifiers; new warm air furnace humidifier. New plenum humidifier (with positive output) will be featured.

DAVIDSON FAN CO., 213 California St., Newton 58, Mass.—Booth 1126

In attendance: John F. Snow, E. F. Patterson, F. E. Coolidge, R. E. Mabey, E. H. Taze, C. E. Parmelee, H. M. Flaherty, M. K. Rush, T. R. Wiley, R. W. Hanson, D. S. Preston, F. G. Phipps, G. V. Sutfin, A. W. Nugent.

Exhibiting: Roof exhaust fan equipment and accessories. Exhibit will feature "Hyduty" roof fan incorporating newly developed slow speed wheel, which maintains high capacity at substantially reduced fan speeds and is just being placed on the market for general distribution.

DAYTON RUBBER CO., 2342 Riverview Ave., Dayton 7, Ohio—Booth 2-132

In attendance: L. C. Strobeck, J. W. Torrant, T. W. Peterson, Geo. Rothe, L. D. Werntz, M. E. Runner, J. D. Hershey, L. J. Adams, J. R. Young, Norm Lever, T. J. Ehrhart.

Exhibiting: "Thorobred" V-belt; "Cog-Belt".

DEBOTHEZAT FANS DIV., AMERICAN MACHINE & METALS, INC., East Moline, Ill.—Booths 130, 132

In attendance: Fred S. Bailey, Ray Bouslough, M. Beline, C. J. Gaspar.

Exhibiting: Induced draft "Bifurcator" fan; power flow roof ventilator; "Bifurcator" duct fan; stainless steel high temperature fan wheels. Induced draft "Bifurcator" stack fan will be featured.

DELAVAN MFG. CO., 3007 6th Ave., Des Moines, Ia.—Booth 506

In attendance: David T. Morgenthaler, E. O. Olson, H. L. McNally.

Exhibiting: Oil burner nozzles and accessories; spray nozzles for cooling towers, evaporative condensers, humidifying, and industrial applications; "Hally" nozzle filters; flame inspection mirrors; oil burner service kits; sludge solvent. New nozzles for air conditioning applications will be featured.

DELTA HEATING CORP., 1 Cole St., Trenton 8, N. J.—Booth 2-1018

In attendance: A. L. Nathan, R. C. Hauck, J. Polland, Wm. Schonfeld.

Exhibiting: Oil and gas fired furnaces (winter air conditioners); oil horizontal type furnaces; oil floor and wall type furnaces; oil and gas gravity furnaces; year 'round air conditioners. New gun type oil floor furnace with circulating fan, operating demonstrator model, and new furnace air conditioning unit, 2 ton size in operation, will be featured.

DETROIT CONTROLS CORP., 5900 Trumbull Ave., Detroit 8, Mich.—Booth 815

DETROIT REGULATOR CO., 1742 Rivard St., Detroit 7, Mich.—Booth 1221

In attendance: Frank Kern, Jr., Charles Stang, Jr., Frank Voakes, D. L. Zorn, Lyle Cornwell, Stan Klots.

Exhibiting: Entire line of "Maxitrol Straight-Thru-Flow" low pressure gas appliance regulators, used primarily on domestic heating appliances but also finding application on commercial and industrial equipment. Model RV-10-⅛" pilot pressure regulator, put into production during September 1952 and designed specifically for the purpose of providing pressure control on gas pilot flames, will be featured. It is finding useful application on conversion burners, furnaces, boilers, unit heaters, water heaters, ranges, refrigerators, and other domestic gas fired appliances.

DEVICES, INC., 214 E. 53rd St., New York 22, N. Y.—Booth 910

In attendance: V. L. Yepsen, B. LeB. Musgrave, Sam R. Adamson, Hank Schmitz, Charles Brown.

Exhibiting: "Miracle" surface anchors and adhesives. "Z" clips used — for example — to attach aluminum foil insulation board to

masonry wall and to afford a base for anchoring air conditioning units will be featured.

DODGE CORP., F. W., 119 W. 40th St., New York 18, N. Y.—Booth 342

DOERR ELECTRIC CORP., 50 N. 3rd Ave., Cedarburg, Wis.—Booths 2-206, 2-208

In attendance: J. H. Park, Carl F. Kowal, H. E. Ellis, Roger Polzin, Lee A. Doerr, Edwin Doerr, Emmett J. Doerr, E. J. Baumann.

Exhibiting: Fan motors; special blower motors; motors for air conditioning circulating pumps and unit heater motors. Newly designed line of motors for fan duty applications, and special 3-lead, 2-speed motor will be featured.

DOLE VALVE CO., 1901-1941 W. Carroll Ave., Chicago 12, Ill.—Booth 1120

In attendance: John L. Dole, Robert M. Ellis, J. F. Lund, Wm. Pennington, Wm. Wallin, Henry Aronson, Stuart G. Phillips.

Exhibiting: Air valves; tempering valves; automatic registers for forced warm air heating systems; water flow control valves; combination automatic hot water air valves and air chambers. New, improved, lower priced automatic register for forced warm air heating systems, and chamber vent valves, will be featured.

DOMESTIC ENGINEERING, 1801 Prairie Ave., Chicago 16, Ill.—Booth 1121

Exhibiting: Publication

DONGAN ELECTRIC MFG. CO., 2987-3001 Franklin St., Detroit, Mich.—Booth 2-518

DOWAGIAC STEEL FURNACE CO., 110-112 Beeson St., Dowagiac, Mich.—Booth 2-219

DOYLE VACUUM CLEANER CO., 225 Stevens St., S. W., Grand Rapids 2, Mich.—Booth 2-212

In attendance: Dewey I. Doyle, Jr., H. F. Arnold, L. F. Hodgins, J. G. Maher.

Exhibiting: Furnace vacuum cleaners.

DRAVO CORP., Heating Dept., Dravo Bldg., 5th & Liberty Aves., Pittsburgh 22, Pa.—Booth 2-339

In attendance: W. L. Davidson, R. C. Black, F. S. Lappin, T. W. Eshbach, J. F. O'Hanlon.

Exhibiting: "Counterflo" space heater. Exhibit will feature the five applications for these heaters — (1) comfort space heating; (2) process drying; (3) heat curing; (4) pre-tempering makeup air; (5) air conditioning and temporary space heating.

DRAYER-HANSON, INC., Box 2215 Terminal Annex, Los Angeles 54, Calif.—Booth 2-524

DREIS & KRUMP MFG. CO., 7400 Loomis Blvd., Chicago 36, Ill.—Booth 242

In attendance: Vincent Bellik, Jack I. Anderson, John Kutscheid, Al Muranko, J. A. Schaefer.

Exhibiting: Hand brakes; press brakes; dies and attachments; special bending brakes and tools. New bench type universal box and pan brake will be featured.

DUNHAM CO., C. A., 400 W. Madison St., Chicago 6, Ill.—Booths 434, 436, 438

In attendance: J. W. O'Neil, Jane Butler, G. A. Mansinger, W. S. Browning, H. S. Marshall, D. B. Stockdale, J. W. Jungels, J. S. Greggory.

Exhibiting: Baseboard, convector and finned tube radiation; propeller fan, blower and gas fired unit heaters; vacuum and condensation pumps; traps, valves and other specialties; "Vari-Vac" differential system and "Metro" method of piping. Gas fired unit heaters and duct furnaces will be featured, and display will be built around the exhibitor's 50th anniversary theme.

DURANT INSULATED PIPE CO., Warren Way off Bay Rd., Palo Alto, Calif.—Booth 1226

In attendance: Wm. H. Buck, P. W. Neely, Wm. R. Funk.

Exhibiting: Prefabricated insulated pipe conduit and accessories. Latest developments and improvements — principally as regards multiple pipe units, anchor and terminal devices — will be featured.

DURODYNE CORP., 38 S. Franklin St., Hempstead, N. Y.—Booth 2-919

In attendance: Martin M. Gracer; Julius R. Gracer.

Exhibiting: "Duro-Blade" hardware used in the fabrication of multi-blade dampers and fire dampers, which allows sheet metal shop to fabricate dampers; "Vane-Runners" used in the fabrication of single blade turning vanes.

DWYER MFG. CO., F. W., 317 S. Western Ave., Chicago 12, Ill.—Booth 1008

In attendance: F. W. Dwyer, J. G. Dwyer.

Exhibiting: Draft gages; manometers; pitot tubes; combustion test sets, smoke gages, air filter gages.

ECKHART MFG. CO., INC., 931 Lehigh Ave., Union, N. J.—Booth 125

In attendance: Arnold Eckhart, Sr., Arnold Eckhart, Jr., Walter E. Eckhart.

Exhibiting: "Silent Korth" oil burners in capacities from 0.60 to 20 gph.

ECONOMY PUMPS—see WHEELER ECONOMY

EDDINGTON METAL SPECIALTY CO., Eddington, Pa.—Booths 2-332, 2-334

ELECTRIC FURNACE MAN, INC., Emmaus, Pa.—Booths 1315, 1317, 1321

ELECTRIGLAS CORP., Bergenfield, N. J.—Booth 2-238

In attendance: Leon Appleman, Kenneth Appleman, Arthur M. Wyatt, Harry Rowe.

Exhibiting: Radiant heating panels for primary and supplementary heating in homes, offices, factories, etc. wall panels; baseboard panels; "Longline" ceiling panel; "300" ceiling panel; suspended ceiling panel; "Thermolite" ceiling heat-light unit. Ceiling panel, especially for new construction, to give dropped ceiling built-in effect will be featured.

ELECTRO-THERM, INC., 931 Selim Rd., Silver Spring, Md.—Booth 2-901

In attendance: S. J. Hayden, L. H. Buffam, C. B. Mullowney.

Exhibiting: Electric heating elements for oil burner preheaters; air conditioning "Freon" foam removal units; crankcase compressor oil heating elements; automatic heating elements with integral thermostats for industrial applications; multiple rod heating elements up to 50 kw.

EMERSON ELECTRIC MFG. CO., 8100 Florissant Ave., St. Louis 21, Mo.—Booth 920

In attendance: O. O. Metz, W. H. Thias, T. J. Egan, F. J. Tullman, O. P. Zenz, F. C. Weaver, R. H. Buss, E. R. Krueger, E. C. Gaskill.

Exhibiting: Motors, 1/20 to 5 hp; hermetic motor parts, 1/8 to 15 hp; exhaust fans. High speed hermetic motors for air conditioning equipment, small and light in weight with hp ratings corresponding to present motors, will be featured.

ENGEL SHEET METAL EQUIPMENT, INC., 3001 N. Union, St. Louis 15, Mo.—Booth 2-1005

EUREKA-WILLIAMS CORP., 1201 E. Bell St., Bloomington, Ill.—Booths 2-430, 2-432, 2-434, 2-436

In attendance: C. S. Stackpole, A. F. Ward, T. H. Green, A. L. Agne, C. G. Branch, Gilbert Bird, Wm. York, Hal Hurston, Ralph Holmberg.

Exhibiting: "Oil-O-Matic" and "Gas-O-Matic" home heating equipment, and featuring residential air conditioning.

EXCELSIOR STEEL FURNACE CO., 118 S. Clinton St., Chicago 6, Ill.—Booth 2-441

In attendance: A. B. Glessner, J. S. McDonald, P. Crowley, E. Jaroch, W. R. Lawson, J. McKinley, W. Schultz, C. Blodgett.

Exhibiting: Furnace pipe and fittings of all types; stainless steel chimney liners. High velocity small pipe line of galvanized fittings will be featured.

FAIRBANKS CO., 393 Lafayette St., New York 3, N. Y.—Booths 141, 143

In attendance: Edmund T. Flanagan, A. T. Wendler, W. O. Keneipp, R. R. Huegli, C. E. Elder, C. G. Long, W. B. Crane, W. H. Peate, P. M. Fallon.

Exhibiting: Bronze and iron body valves; "Dart" malleable iron unions; "Pic" steel unions; steel casters, "Lockweld" swivel and matching rigid two wheel and platform hand trucks; wheels. "Bantamweight" platform trucks (new lightweight hand truck) will be featured.

FARR CO., P. O. Box 10187, Airport Station, Los Angeles 45, Calif.—Booth 907

In attendance: J. D. McCampbell, G. R. Holtz, J. S. Powell, E. Kirkpatrick.

Exhibiting: "Far-Air" self-washing filter; filter; grease eliminator; "Golden Rotor" evaporative cooler; engine compressor filter. A moving display featuring the self-washing filter will be featured.

FASCO INDUSTRIES, INC., P. O. Box 509, Rochester 2, N. Y.—Booth 1020

FEDDERS-QUIGAN CORP., 57 Tonawanda St., Buffalo 7, N. Y.—Booth 1143

In attendance: C. W. Little, G. M. Meyer, A. J. DeFino, S. Giordano, A. F. Ihde, F. E. Kahler, E. E. Humphrey, W. E. Zielonka, J. I. Woodworth, W. K. Smith, J. P. Divizio, E. Twelves, R. W. Morgan, L. J. Sahs, J. P. Guerra, H. Mould, R. E. Cassatt, F. A. Mitchell, H. Brockway, V. LaRussa.

Exhibiting: Baseboard radiation; convector radiators featured in decorator colors; wall radiation; unit heaters; dehumidifiers; room air conditioners and water coolers. Features include a completely new unit heater, convector radiators to blend with any color selected for interior decoration, and new line of air conditioners redesigned and restyled for 1953, with "Weather Bureau" with "pushbutton weather" as the main theme.

FEDERAL BOILER CO., INC., Midland Park, N. J.—Booths 2-318, 2-320

In attendance: James Legg, Roy Rathe, Mr. Allstrom, Walter Kingsberry, I. Holland, Roy Bohn

Exhibiting: Complete line. "UGF" series, AGA approved for gas operation, including the use of copper domestic internal tankless coils rated from 76,800 Btu to 104,000 Btu net output, available as a prefabricated package, will be featured.

FIELD CONTROL DIV., H. D. CONKEY & CO., Mendota, Ill.—Booth 1024

In attendance: C. W. Potter, H. J. Potter, Lee Beardsley, E. A. Field.

Exhibiting: Barometric draft controls, and featuring new double acting gas control.

FITZGIBBONS BOILER CO. INC., 101 Park Ave., New York 17, N. Y.—Booths 101, 102

In attendance: P. K. Addams, G. E. Olsen, J. R. Collette, G. Nelligann, W. O. Spiess, F. W. Harmer, M. F. May, R. Wevang.

Exhibiting: Improved "R-Z-U Junior" boiler, with burner, controls, trim; "80" series boiler, with burner, controls, trim; scotch type boiler; "400" series residential boiler-burner unit; new, improved "Tanksaver" instantaneous hot water coil.

FOOD MACHINERY & CHEMICAL CORP.—see PEERLESS PUMP DIV.

FOREST CITY FOUNDRIES CO.—see NIAGARA FURNACE DIV.

FREEMAN STOKER DIV., ILLINOIS IRON & BOLT CO., 914 S. Michigan Ave., Chicago 5, Ill.—Booth 2-431

FRICK CO., West Main St., Waynesboro, Pa.—Booths 119, 121

In attendance: C. C. Smith, G. E. Elden, W. O. Kline, J. A. Etter, R. M. Shuford, H. F. Burpee, V. J. Sparks, C. P. Goree, P. A. Willis, A. E. Roebke, P. H. Buch.

Exhibiting: "Eclipse" four cylinder compressor, cut-away and in slow motion; nine cylinder compressor; 5 hp unit air conditioner; machine parts, new safety valve, etc.

FRIGIDAIRE DIV., GENERAL MOTORS CORP., 300 Taylor St., Dayton 1, Ohio—Booths 511, 513, 515, 517

In attendance: C. F. Wood.

Exhibiting: Self-contained air conditioners; window unit room air conditioners; water coolers; dehumidifier; refrigeration compressors; cooling coils. Central system residential air conditioner combining cooling and heating for year 'round use, and central system residential air conditioner for cooling complete home, will be featured.

FUELOIL & OIL HEAT, 2 W. 45th St., New York 19, N. Y.—Booth 947

Exhibiting: Publication

FULTON SYLPHON DIV., ROBERTSHAW-FULTON CONTROLS CO., Knoxville 4, Tenn.—Booth 106

In attendance: E. T. Cato, N. W. Barnes, L. D. Jones, L. S. Dysart, E. D. Rogers.

Exhibiting: Temperature controls; pressure controls; automatic radiator valves, expansion joints. New expansion joint for baseboard type hot water heating systems will be featured.

GALLAHER CO., 4108 Dodge St., Omaha 3, Neb.—Booth 2-309

GAS HEAT, 2 W. 45th St., New York 19, N. Y.—Booth 947

Exhibiting: Publication

GENERAL AUTOMATIC PRODUCTS CORP., 2500 Sinclair Lane, Baltimore 13, Md.—Booths 2-410, 2-412

In attendance: Walter R. Way, Harold F. Browning, Chas. E. Hight, H. J. Hughes, Robert E. Lee.

Exhibiting: Gas fired and oil fired warm air units; baseboard radiation.

GENERAL BLOWER CO., 8610 Ferris Ave., Morton Grove, Ill.—Booths 2-324, 2-326

In attendance: Wm. W. Meyer, H. R. Johnston, R. P. Scott, J. Wind, Wm. Chum, S. Klocek.

Exhibiting: Centrifugal fans; blowers and exhausters; turbo blowers; welding fume exhausters; steel plate exhausters; inlet valve control.

GENERAL CONTROLS CO., 801 Allen Ave., Glendale 1, Calif.—Booth 1206

In attendance: J. F. Ray, F. Weldon, B. Lerch, W. Kell, R. Weber, H. Lindstrom, H. Smith, R. Strongman, H. Safford.

Exhibiting: Heating, ventilating and air conditioning controls. Mercury switch thermostat and "super-powered" heat control package set will be featured.

GENERAL ELECTRIC CO., AIR CONDITIONING DIV., 5 Lawrence St., Bloomfield, N. J.—Booths 145, 247

In attendance: F. J. Van Poppelen, L. E. Thompson, G. W. Hart, S. J. Levine, R. C. Robertson, W. L. Sneltjes, G. K. Iwashita, W. F. R. Karsten, J. J. Heffernan.

Exhibiting: Air conditioning units; boilers—oil and gas; cooling equipment—home and commercial; furnaces—oil and gas; water cooling—water coolers. Year 'round residential air conditioning line; "Air-Wall" heating and cooling system; new downflow and horizontal furnaces; boiler display; packaged air conditioner; and commercial water cooler working model cutaway will be featured.

GENERAL ELECTRIC CO., APPARATUS SALES DIV., 1 River Rd., Schenectady 5, N. Y.—Booth 2-221

In attendance: W. T. Goldsmith, P. Gomez, R. D. Tyler, W. F. Brunner, C. J. Ossenfort, C. D. Pease, J. B. O'Connor.

Exhibiting: Complete line of heating controls; line of fractional hp motors for the industry. Heating controls will be featured.

GENERAL FILTERS, INC., 12890 Westwood Ave., Detroit 23, Mich.—Booth 525

In attendance: Robert G. Gregory, Roland A. Redner, Mrs. Grace Redner.

Exhibiting: Complete line of fuel oil filters for both light and heavy fuel oils; soot remover; hydraulic and lubricating oil filters. New filter for heavy fuel oils will be featured.

GENERAL GAS LIGHT CO., 202 N. Park St., Kalamazoo, Mich.—Booth 2-818

In attendance: A. H. Humphrey, R. P. Humphrey, W. H. Jackson, Nat Blinks, C. G. Weirs.

Exhibiting: "Humphrey" unit heaters (gas fired); circulators (gas fired); "Radiantfires".

GLASFLOSS, 155 E. 44th St., New York 17, N. Y.—Booth 315

In attendance: R. R. Pryor, W. E. Grasberger.

Exhibiting: Standard throw-away air filters; "I-S" impingement-strainer air filters; filter media.

GLYCOLATOR DIV., IRON CITY CHEMICAL CO., Valencia, Pa.—Booth 915

In attendance: Robert G. Schmidt, A. W. Iams, George C. Hein, W. Gans.

Exhibiting: Furnace "Glycolator"; Monarch "Glycolator"; Royal "Glycolator"; Regal "Glycolator"; Rex "Glycolator"; commercial "Glycolators". New model furnace and Royal "Glycolator" will be featured.

GOODFELLOW CO., INC., E. D., 496 E. Bodley Ave., Memphis 6, Tenn.—Booth 2-439

In attendance: Robert Colmer, F. E. Conaway, C. E. Goodfellow, E. D. Goodfellow.

Exhibiting: Steel cased induced draft cooling towers; direct connected centrifugal pumps. New line of high efficiency direct connected centrifugal pumps for air conditioning, refrigeration and similar applications will be featured.

GOULDS PUMPS, INC., 200 Fall St., Seneca Falls, N. Y.—Booth 2-114

In attendance: W. J. Howell, Paul Thompson, B. F. Barnett, C. L. Forshee, P. J. Olmstead, F. G. Paffrath.

Exhibiting: New group of horizontally split case, single stage centrifugal pumps; new line of small centrifugals particularly adaptable for air conditioning; other pumps, such as stainless steel centrifugals, etc.

GOVERNAIR CORP., 513 N. Blackwelder, Oklahoma City 4, Okla.—Booth 2-619

GREENLEE TOOL CO., 2136 12th St., Rockford, Ill.—Booths 531, 533

In attendance: R. J. Samuelson, A. H. Hawkinson, P. E. Chappel, R. W. Stevenson, R. D. Rayburn.

Exhibiting: Hand and power operated hydraulic pipe pushing machines for underground construction; mechanical hand benders; hand and power operated hydraulic benders; various types of boring tools of interest to the pipe trade. No. 785-BE power operated bender, 1-¼ in. to 5 in. capacity, and No. 798 electric power pump will be featured.

GRINNELL CO., INC., 260 W. Exchange St., Providence 1, R. I.—Booth 305

In attendance: A. F. Van Eck, D. A. Johnson, and others.

Exhibiting: Pipe fittings; pipe hangers; spring hangers; constant supports; welding fittings; diaphragm valves; unit heaters; prefabricated piping; automatic sprinklers. Textile unit heater, especially designed for use in textile mills, etc., will be featured.

GUSTIN-BACON MFG. CO., 210 W. 10th St., Kansas City, Mo.—Booth 543

In attendance: H. O. Sheidley, H. M. Grant, G. C. Jordan, F. H. Ebbert, M. F. Hauserman, Jr., E. N. Sleight, B. P. Murphy.

Exhibiting: "Ultralite" and "Ultrafine" glass fiber insulations for heating, ventilating and air conditioning ducts and appliances. Several new products will be featured.

HARRIS & CO., ARTHUR, 212 N. Aberdeen St., Chicago 7, Ill.—Booth 1026

In attendance: George C. Harris, Arthur H. Elliott.

Exhibiting: Copper, stainless steel, steel, and aluminum floats.

HART & COOLEY MFG. CO., 500 E. 8th St., Holland, Mich.—Booth 1025

In attendance: George D. Heeringa, E. J. Rowder, John H. VanDyke, Fred H. Heads, Robert J. Kubat, Richard Smeenge, George Braun.

Exhibiting: Registers, grilles and diffusers for warm air heating and air conditioning. Floor and sidewall diffusers for perimeter heating installations will be featured.

HASTINGS INSTRUMENT CO., INC., Hampton, Va.—Booth 1342

In attendance: Raymond T. Doyle, John L. Wright.

Exhibiting: Standard "Air-Meter", precision "Air-Meter", electronic manometer flowmeter; vacuum gage. Exhibit will show graphically how air velocity measurement can promote efficient, money-saving installation of heating and ventilating systems and will demonstrate the ability of "Air-meters" to measure air velocities as low as 5 fpm.

HEATING, PIPING & AIR CONDITIONING, 6 N. Michigan Ave., Chicago 2, Ill.—Booth 425

In attendance: Frank P. Keeney, Charles E. Price, Wallace J. Osborn, Robert A. Jack, C. M. Burnam, Jr., George C. Cutler, James D. Thomas, Thomas V. Johnson, Robert J. Osborn, Frank S. Easter, James E. Sacra, David V. Mahan.

Exhibiting: Heating, Piping & Air Conditioning magazine; market information.

HEATING & VENTILATING, 148 Lafayette St., New York 13, N. Y.—Booths 537-539

Exhibiting: Publication

HEAT-TIMER CORP., 520 Broadway, New York 12, N. Y.—Booth 439

In attendance: Harry Zeitlin, Edward J. Zeitlin, Lee Leighton.

Exhibiting: Electronic weather actuated control; thermostatic air valves; quick vent air valve; smoke eye. New electronic weather actuated control; "Thermo-Air" valves, quick-vent "Vari-valves", and smoke eyes will be featured.

HEIL CO., 3000 W. Montana St., Milwaukee 1, Wis.—Booths 1246, 1347, 1348

In attendance: George Hochstein, Roy King, Don Fricker, Karll Mould, Wm. Schumacher, J. F. Heil, Sr., John Barclay, Jack Huber, Herbert Erdman, J. F. Heil, Jr., Fred Brubaker, Fred Zwanzig, K. F. Johnson.

Exhibiting: Oil and gas fired winter air conditioners, steam and hot water boilers, and conversion burners. The oil and gas fired furnaces and boilers will be featured.

HENRIKSEN CO., C. O., 2300 S. Avers Ave., Chicago 23, Ill.—Booth 937

In attendance: C. O. Henriksen, H. W. Henriksen, G. B. Henriksen, C. O. Ricketts, C. E. Evilsizer.

Exhibiting: Miniature firebrick models of combustion chambers; photographs of boiler settings and furnace installations.

HENRY FURNACE CO., Medina, Ohio—Booth 406

In attendance: J. Crombie, C. L. Travers, W. H. Olsen, R. H. Olsen.

Exhibiting: Horizontal furnaces, gas and oil fired; gas fired unit heaters; cooling equipment; gas and oil conversion burners; counterflow, "Hi-boy" and basement type winter air conditioning equipment, gas and oil fired; gravity furnaces, gas and oil fired. Horizontal furnaces, gas fired unit heaters; gas conversion burners, and cooling equipment will be featured, and there will be a "live" demonstration of a loop type perimeter system using a counterflow winter air conditioning unit.

HERSHEY MACHINE & FOUNDRY CO.—see MOTORSTOKER DIV.

HOFFMAN SPECIALTY MFG. CORP., 1001 York St., Indianapolis 7, Ind.—Booth 2-218

In attendance: N. D. Skinner, R. J. McCracken, A. O. Roche, Jr., R. G. James, W. W. Dillon.

Exhibiting: Complete line of heating specialties for steam and water; "Webster Tallmadge" zone controls. Universal vent for water or steam, hot water vent, and new line of vacuum and condensation pumps will be featured.

HOOK & ACKERMAN, INC., 9 E. 40th St., New York 16, N. Y.—Booths 1208, 1210

In attendance: W. F. Hosmer, J. F. Baier, H. S. Ackerman, W. W. Metsch.

Exhibiting: "Hydrotherm" gas fired boiler for hot water systems.

HOOVER CO., KINGSTON-CONLEY DIV., 68 Brook Ave., North Plainfield, N. J.—Booth 2-109

In attendance: R. A. Potter, J. C. Hoover, R. I. Bratt, B. G. Roskopp, R. F. Carey, C. P. Williams, W. A. Pizzini, R. E. Swin, A. E. Ott.

Exhibiting: Fractional and integral horsepower electric motors.

HOUSE & CO., T. S., 555 S. Kensington Rd., Cleveland 16, Ohio—Booth 2-804

In attendance: T. S. House, R. L. Linquist, J. C. Zancker, F. V. Kassell, Jack Harrison.

Exhibiting: "Wilder" slitting shears and "Bett-Marr" sheet metal band saws. The power driven shear will perform the functions of a 10 ft squaring shear, and the sheet metal band saw is of interest to every shop making its own warm air fittings.

IDEN ASSOCIATES, 1809 Milwaukee Ave., Chicago 47, Ill.—Booth 2-812

In attendance: James Bateman, Ray J. Iden.

Exhibiting: "Ventfab" and "Ventglas" fabrics for flexible connections in ventilating and air conditioning systems.

ILG ELECTRIC VENTILATING CO., 2850 N. Crawford Ave., Chicago 41, Ill.—Booth 1042

In attendance: B. L. Casey, A. C. DeSmet, J. P. Hertz, W. H. Hallsteen, C. W. Dexter, P. A. Charter.

Exhibiting: Direct-connected centrifugal fans; tube axial fans; power roof ventilators; window fans; unit heaters; direct-connected propeller fans.

ILLINOIS ENGINEERING CO., Racine Ave. & 21st St., Chicago 8, Ill.—Booth 1142

In attendance: Robert L. Gifford, James C. Matchett, Gordon L. Harris, J. L. Ehretsman, R. W. Leutwiler, Paul B. Hultgren, L. Bandet, A. F. Nesbet, W. A. Loehrl, A. Marshall, G. Snagel, K. Johnson, L. Moore.

Exhibiting: Glass model of steam trap operating under steam; recording instrument performance of float and thermostatic trap draining a unit heater under steam; complete control panels and cabinets for standard and high vacuum steam heating control systems; general line of heating specialties for standard vacuum, high vacuum and vapor heating systems. Latest developments in automatic steam and fluid control equipment will be featured.

ILLINOIS IRON & BOLT CO.—see FREEMAN STOKER DIV.

ILLINOIS TESTING LABORATORIES, INC., 420 N. LaSalle St., Chicago 10, Ill.—Booths 1032, 1034

In attendance: M. D. Rauscher, Monroe D. Carlson, Charles O. Wilson.

Exhibiting: Pyrometers; "Velometers;" dew pointers; thermo-anemometers; controllers, resistance thermometers.

IMPERIAL BRASS MFG. CO., 1200 W. Harrison St., Chicago 7, Ill.—Booth 225

In attendance: C. H. Benson, F. McNellis, Jr., A. E. Hallstrom, R. Cherney, Harold McNellis, E. F. Todd, G. Franck.

Exhibiting: Flared, compression, "Hi-Duty", "Kwik-Tite" and brass pipe fittings; tube fittings for LP gas; refrigeration flared tube fittings; refrigeration valves; refrigeration driers; shut-off valves; tubing tools; soldering equipment. New equipment to be featured includes No. 500-F "Rol-Air" flaring tool, which both flares and burnishes tubing; No. 270-F gear-type tube bender, which bends all kinds of tubing including hard temper copper; improved "DiaSeal" refrigeration valves; No. 350-F full-range heavy duty tube bender; No. 362-FA 2-in-1 benders; No. 206-F slide to size tube cutter for large sizes of tubing.

INDEPENDENT REGISTER CO., 3747 E. 93rd St., Cleveland 5, Ohio—Booth 124

In attendance: K. B. Solberg, B. N. Richardson.

Exhibiting: Registers and grilles for heating, air conditioning and ventilating. Registers and grilles for perimeter heating installations will be featured.

INGERSOLL-RAND CO., 11 Broadway, New York 4, N. Y.—Booth 2-300

In attendance: R. E. Allen, W. W. Cramer, D. N. Douglas, E. L. Raining, Jr., C. W. Gray, J. L. Carpenter, H. D. Ford, H. W. Newsome, R. J. Dodge, H. L. Gay, J. W. French, O. E. Schneider, C. M. Wilkins, Jr.

Exhibiting: Centrifugal pumps and air compressors particularly adapted to heating, ventilating and air conditioning. One pump will be operated and circulating liquid through a model of a tryical air conditioning system with variable conditions of operation. "KRVS" line of small centrifugal motor-pumps with mechanical seals will be featured. The line has recently been extended in coverage. A new line of horizontally-split, single-stage, double-suction pumps with mechanical seals; and non-lubricated air compressors for oil-free instrument control air supply will be featured.

INSULATING CONCRETE CORP.—see ZONOLITE CO.

INTERNATIONAL HEATER CO., 101 Park Ave., Utica 2, N. Y.—Booth 443

In attendance: Jack Bennett, James D. Bond, Charles Bremer, William Hutchinson, Frank Mehrings, Clyde Moyer, Jr., Clyde Moyer, Sr., Irving C. Barber, John J. Hildebidle, N. R. Foloky, Millar Wheeler, Elwood Hesch.

Exhibiting: Gas and oil "Hi-Boys"; "Lo-Boys"; gravities; counterflows; oil burning boiler. New assembled gas and oil "Hi-Boys" and "Lo-Boys" will be featured.

INTERNATIONAL MFG. CO., 600 E. Grand, Oklahoma City, Okla.—Booth 529

IRON CITY CHEMICAL CO.—see GLYCOLATOR DIV.

IRON FIREMAN MFG. CO., 3170 W. 106th St., Cleveland 11, Ohio—Booths 1232, 1234, 1236, 1238

In attendance: C. T. Burg, W. J. O'Neil, E. C. Webb, Dale Wylie, George Armour, E. W. Jones, J. C. Veltman.

Exhibiting: Residential oil, gas and coal burners, boilers and furnaces; commercial-industrial gas burners and oil burners, and stokers, and combination units for dual and triple fuel firing; residential gas winter air conditioner furnaces, highboy and lowboy models, and Kewanee-Iron Fireman oil-gas boiler-burner unit will be featured.

JACKSON & CHURCH CO., 321 N. Hamilton St., Saginaw, Mich.—Booths 134, 136, 138, 2-802

In attendance: C. W. Stuart, D. L. Perrot, L. S. Redford, F. C. Adams, Stan Richards, Frank E. Young, Jr., Herbert F. Robinson, Samuel S. Neide, Arthur W. Pracker, Paul R. Deuble, W. H. Tonner, J. B. Winston, Arthur E. Duwe, Richard J. Hoover, R. F. Goughnour, Ray P. Jones.

Exhibiting: Oil and gas fired suspended furnaces; oil and gas fired floor furnaces. New type oil burners on suspension equipment, new "Stule" heat exchanger for suspended and basement models, and larger gas suspended furnaces will be featured.

JACUZZI BROS. INC., 4100 Bayless Ave., St. Louis 23, Mo.—Booth 2-526

In attendance: Robert W. Hawkins, J. Walter Glock, Dante Jacuzzi.

Exhibiting: Air conditioning pumps and circulators; heating pumps and circulators. New "Series A" pumps and circulators for heating and air conditioning industries will be featured.

JEFFERSON ELECTRIC CO., 25th & Madison, Bellwood, Ill.—Booth 2-312

In attendance: C. T. Harnett.

Exhibiting: Oil burner ignition transformer.

JENKINS BROS., 100 Park Ave., New York 17, N. Y.—Booth 243

Exhibiting: Valves.

JENN AIR PRODUCTS CO., 333 N. Pennsylvania St., Indianapolis 4, Ind.—Booth 1010

In attendance: C. V. Patterson, Edw. Filkins, Edw. Neiderhofer, L. J. Jenn.

Exhibiting: New and improved wall and roof exhaust equipment.

JOHNSON CO., S. T., 401 N. Broad St., Philadelphia 8, Pa., 940 Arlington Ave., Oakland 8, Calif.—Booth 2-402

In attendance: D. E. Johnson, Robert P. Johnston, W. S. Harlacher, W. Thoms, W. E. Lees, A. V. Leudemann.

Exhibiting: Commercial, industrial and residential type oil and combination oil and gas burners; boiler burner units; furnace burner units; water heaters and high pressure boilers. Recently acquired "MKO" division will show high pressure boilers up to 30 hp — gas, oil or combination oil and gas fired.

JOHNSON SERVICE CO., 507 E. Michigan St., Milwaukee 2, Wis.—Booths 1007, 1009, 1011, 1013, 1015

In attendance: M. M. Herrick, J. J. Philippi, C. A. Storch, H. H. Korff, C. K. Henriksen, Henry Seetch, J. C. Barr, M. E. Coobs, I. G. Doptis, O. A. Star, Jr., G. E. Bendix, L. C. Carlsen, A. J. Hunter.

Exhibiting: Automatic temperature and air conditioning control systems, with the instruments and controllers in actual operation. New model of electronic "duo-Stat", a weather-compensated heat regulator; new "Record-O-Stat" recorder-controller; and an expanded line of small control valves for convectors and unit air conditioners will be featured.

JOY MFG. CO., Henry W. Oliver Bldg., Pittsburgh 22, Pa.—Booths 1111, 1113, 1115, 1117

In attendance: R. A. Heindel, C. L. Tinker, H. A. Devlin, C. R. Browning, C. R. Hiers, A. T. Bloxham, J. P. Gardner.

Exhibiting: Direct drive, belt drive and controllable pitch, "Series 1000" fans for industrial and commercial applications; aircraft fans; electronic equipment cooling fans; general purpose plastic fans. Three large units representative of all types of "Series 1000" fans will be exhibited for the first time, and several representative new models of aircraft and electronic equipment cooling fans will be shown.

KAUSTINE CO. INC., Perry, N. Y.—Booths 316, 320

In attendance: J. B. Mollnow, Sr., J. B. Mollnow, Jr., W. F. Stahl, R. E. Preine.

Exhibiting: Oil fired warm air furnaces.

KEENEY PUBLISHING CO., 6 N. Michigan Ave., Chicago 2, Ill.—Booth 425

In attendance: Frank P. Keeney, Chas. E. Price, Wallace J. Osborn, Robert A. Jack, C. M. Burnam, Jr., George C. Cutler, James D. Thomas, Clyde M. Barnes, Thomas V. Johnson, Robert J. Osborn, Frank S. Easter, James E. Sacra, David V. Mahan.

Exhibiting: Heating, Piping & Air Conditioning magazine; American Artisan magazine; market information.

KENNARD CORP., 1819 S. Hanley Rd., St. Louis 17, Mo.—Booths 224, 226, 228

In attendance: Sam M. Kennard, III, Ben M. McDougall, W. Boardman Jones, F. G. Bietsch, F. W. McKenna, E. John Hill, C. Z. Adams, A. E. Randklev, Arnold Croohe, John J. Barry, Ray Bauer, R. J. Clark, Wm. H. Dudley, John R. Ellstrom, James F. Hoey, R. F. Sullivan, Floyd Baird, Richard Kitch, Gordon Ervin, David S. Falk, Robert I. Fruth, Ted Jasuta, Olan J. Hill, Duane A. Krohn, O. K. McCullough, Ben Paller, Doug Palmer, Sax Lawrence, Z. M. Prane, Fred Rodgers, Gary G. Schultz, L. E. Slawson, R. H. Spangler, J. Fuller Stafford, C. L. Bensen, Vernon Tupper, Carl J. Vespasian, Elwood C. Giberson.

Exhibiting: Multi-zone air conditioning units; heating and ventilating units; air conditioning coils for cooling and heating; cooling towers. Small cooling towers suitable for residential air conditioning application will be featured.

KENT CO., INC., 107 Canal St., Rome, N. Y.—Booth 535

In attendance: C. E. Clifford, and others.

Exhibiting: Double suction furnace and boiler cleaner. Used in conjunction with the auxiliary dirt tank for added capacity it is available for furnace cleaning jobs which require a capacity over and beyond what is required for domestic heating plants.

KEWANEE-ROSS CORP., Kewanee, Ill.—Booth 715

KINGSTON-CONLEY DIV.—see HOOVER CO.

KLEER-KLEEN MFG. CO., 901 72nd Ave., Oakland 21, Calif.—Booth 2-615

In attendance: R. D. Fish, C. S. Laumeister; Early E. Sanders, Jr.

Exhibiting: Floor and wall oil burning furnaces. "Channel Flame" vaporizing conversion oil burner with electric ignition will be featured.

KORFUND CO. INC., 48-15 32nd Pl., Long Island City 1, N. Y.—Booth 943

In attendance: Donald H. Vance, Norman Creash, Alex Budzi, George Zintel, Lou Fabning, George Hoffman, Kirby Quinn, Ed. Gifford, A. R. Martin.

Exhibiting: Duplex twin rail fan and motor base; steel spring "Vibro" isolators; "Elasto Rib"; rubber mountings, cork products. Models of equipment and photographs showing typical application of products to industry will be featured.

KRITZER RADIANT COILS, INC., 2901 Lawrence Ave., Chicago 25, Ill.—Booth 343

In attendance: H. E. Kritzer, C. G. Newton, C. C. Schedler, H. E. Kritzer, Jr., M. A. Lucchese, R. E. Fennema.

Exhibiting: Commercial fin pipe coils and covers; baseboard coils and enclosures; radiant fin tube coils. New design features embracing all models of the line will be shown.

LAHARCO INDUSTRIES, 721 2nd Ave. N., Minneapolis 5, Minn.—Booth 129

In attendance: W. R. Anderson, H. E. Latourell.

Exhibiting: Gas conversion burners.

LAKE CHEMICAL CO., 3052 Carroll Ave., Chicago 12, Ill.—Booths 2-714, 2-716

In attendance: Dr. L. Aronberg, B. Lytton, A. H. Cahn, Martin Stanford, C. Kleiman, Lou Trisler, C. H. Sudakoff, Wm. J. McSherry.

Exhibiting: "Pipetite-Stik" pipe joint compound in stick form; "Krak-Stik" sealing cement and caulking compound in stick form. "Oilyltite-Stik" cement for sealing leaky oil tanks, etc. and "La-Co" non-acid, self-cleaning flux in stick form will be featured.

LAU BLOWER CO., 2001 Home Ave., Dayton 7, Ohio—Booths 211, 213, 215

In attendance: H. W. Faulkender, T. I. Byrd, J. Burrowes, W. Wentling, E. Sullivan, Ernie Wolford, Ed Humphrey, Jim Wallace, Charles Miley, Charles Sigman, Bill Lohrey, Lee Gillespie, Gene Brown, Don Jensen, G. R. Mergenthaler.

Exhibiting: Blower assemblies; direct drive blowers; weld wheels; hot dip galvanized wheels; hot dip galvanized blower assemblies; "Gold Seal" bearings; "Lausteel" pulleys, CS and VS; package units; "Porta-Breez"; "Tilta-Breez"; new motor mounting; new direct drive blower; and "Gold Seal" bearings will be featured.

LIMA REGISTER CO., 651 N. Baxter St., Lima, Ohio—Booth 521

In attendance: Henry R. Pataky, C. J. LeMaster, R. B. Morey, Ray Boland, John T. Thornton.

Exhibiting: Registers and grilles for warm air heating and air conditioning. New wall diffuser for perimeter and small pipe installations will be featured.

LIPMAN REFRIGERATION DIV., YATES-AMERICAN MACHINE CO., 126 E. Shirland, S. Beloit, Ill.—Booth 931

In attendance: F. H. Kibler, J. J. Gallagher, Ray Collins, H. L. Hayhurst.

Exhibiting: Convertible type packaged air conditioner (2, 3, 5 and 7½ tons); window unit (½ and ¾ ton). The convertible type unit is a new feature in that it can be readily converted from a residence unit to a commercial unit.

LIQUIDEPTH INDICATORS, INC., 43-22 10th St., Long Island City 1, N. Y.—Booth 1147

In attendance: Dan Bierman, Arthur Bierman, Norbert M. Milair, James J. Wargas, Joseph A. Jawett.

Exhibiting: Liquid depth indicating equipment.

LOCKFORMER CO., 4615 W. Roosevelt Rd., Chicago 50, Ill.—Booth 417

In attendance: George W. Lamberson, Harold G. Flagler, John Davis, Edward C. Bill.

Exhibiting: "Lockformer"; "Cleatformer"; "Easy Edger"; and "Lockformer" slitting attachment. Power takeoff from the "Lockformer", making a compact and practical unit for large and small shops alike, will be featured, and a brand new development will be displayed for the first time.

MAGNAFLOW PUMP CORP., 45 Astor Pl., New York, N. Y.—Booth 2-608

MAGNETROL, INC., 2110 S. Marshall Blvd., Chicago 23, Ill.—Booth 2-528

In attendance: Lester E. Stybr, B. L. Binford, James Vonesh.

Exhibiting: Boiler water level controls, including low level cutoffs, feed pump control and low level cutoffs, and combination water columns and boiler water level controls; tank float switches — top mounting, side mounting (with float in tank), and external float cage units; displacement type controls for tank and sump applications; refrigeration control; flow switch; high and low level alarms. Operating model of tandem unit for pump control and alarm service, and combination water column and boiler control in simulated boiler service, will be featured.

MAID-O'-MIST, INC., 3217 N. Pulaski Rd., Chicago 41, Ill.—Booth 1017

In attendance: Wm. G. Mussun, E. E. Berthet, Geo. C. Hench, James McEntee, Joe O'Connor, E. J. Busch, E. H. Price, H. J. Carr, O. V. Woolley, James A. Madden, Herbert Waterstraat, Paul Thompson.

Exhibiting: Automatic air valves for hot water heating systems; automatic humidifiers for all types of heating; water line float control valves; balancing valve adapter units; heating specialties.

MARIETTA METAL PRODUCTS CORP., 540 N. 63rd St., Philadelphia, Pa.—Booths 2-413, 2-415

MARLEY CO., 222 W. Gregory Blvd., Kansas City 13, Mo.—Booth 1043

In attendance: L. T. Matt, L. A. Christensen, J. A. Cameron, F. B. Reed, W. G. Cramer, R. W. Maze, R. L. McFadin, O. E. Bloebaum, E. T. Gessell, W. W. Starke.

Exhibiting: Double-flow "Aquatower"; "Aquatower"; natural draft tower. Cut-away structure of a 50 ton double-flow "Aquatower" will be featured.

MARLO COIL CO., 6135 Manchester, St. Louis 10, Mo.—Booths 1001, 1002, 1101

In attendance: H. R. Iverson, K. W. Wickes, A. G. Allen, Jim Chapman, Bert E. Martin, Walter B. Moses, Jr., Walter W. Murphy, George F. Flinn, Guy Hairston, Norman Weinstein, Louis Davidson, Ralph Strutzel, J. T. Hultgren, R. K. Hunter, Howard Caton, Ralph Pat Kelley, John J. Kramer, E. H. Lambert, George M. Seebree, S. S. Webb, F. G. Meyers, L. C. Pellegrini, F. Ed. Ince, A. T. Marlo, C. D. Marlo, H. Kain.

Exhibiting: Evaporative condensers; cooling towers; multi-zone units; remote type room conditioners, ceiling and floor type; ceiling and floor type air conditioning units; blast coils for heating and cooling. A new line of heating and ventilating units for ceiling or floor mounting, designed specifically for heating installations only, will be featured.

MARSH HEATING EQUIPMENT CO., 3501 Howard St., Skokie, Ill.—Booths 1130, 1132

In attendance: James Emmett, Jr., Wm. Ensign, R. E. Barnett, Charles Kelly, S. C. Kauffman.

Exhibiting: Complete line of heating specialties, including radiator valves, radiator traps, steam traps, bucket traps, vents and also a representative number of gages, thermometers, water regulating valves, solenoid valves, and needle valves. Complete new line of needle valves, also new "Serviceman" testing thermometers, will be featured.

McCORD CORP., 2587 E. Grand Blvd., Detroit 11, Mich.—Booth 2-538

McDONNELL & MILLER, INC., 3500 N. Spaulding Ave., Chicago 18, Ill.—Booths 936, 942

In attendance: E. N. McDonnell, Nils W. Swanson, George La Roi, John James, Wm. Gleason, Leo Kmiecik, Richard Flickinger, J. W. Ramsay, Howard Peary, Richard Berry, Jerry Flaherty, James Platt, Gene Mitchell, George Kelly.

Exhibiting: Full line of safety devices, including boiler water feeders, low water fuel cutoffs, pump controllers, temperature relief valves, pressure relief valves, combinations of temperature and pressure relief valves, float switches, float valves, explosionproof controllers, humidifier water level controls, and related products. New improved line of temperature relief valves and combinations of temperature and pressure relief valves for hot water systems will be exhibited for the first time.

McQUAY, INC., 1600 Broadway St., N. E., Minneapolis 13, Minn.—Booths 309, 311, 313

In attendance: H. B. Thomas, K. R. Lundberg, F. F. Altman, W. H. Markson, D. R. Wallin, A. R. Flynn, H. B. Williams.

Exhibiting: Heating and ventilating unit; air conditioning unit; heating and cooling coils, multi-zone air conditioner, remote room air conditioners; special application ⅜ in. tube coils. Five types of remote room air conditioners, newly designed line of heating and ventilating and air conditioning units, and ⅜ in. tube coils designed primarily for manufacturers of self-contained room air conditioners will be featured.

MERCOID CORP., 4201 W. Belmont Ave., Chicago 41, Ill.—Booths 116, 120

In attendance: Hugh Courteol, J. W. Owens, R. Fenton Fisher, W. L. Colterjohn, W. K. Stauffer, J. F. McCauley, J. A. Johnson, Wm. Ufer, W. E. Jones, W. L. Lischett, I. E. McCabe, V. S. Krale.

Exhibiting: Complete line of mercury switch equipped automatic controls for heating, ventilating, refrigeration, air conditioning and industrial applications.

METALS & CONTROLS CORP. — see SPENCER THERMOSTAT CO. DIV.

METROMATIC MFG. CO., 21 Henderson St., Everett 49, Mass.—Booths 1316, 1318, 1320

MID-CONTINENT METAL PRODUCTS CO., 1960 N. Clybourn Ave., Chicago 14, Ill.—Booth 1224

In attendance: A. F. Zitzewitz, E. J. Haedike, C. F. Petersen, E. W. Haedike.

Exhibiting: Power type gas burners for residential, commercial and industrial boilers and furnaces; operating exhibits of both the "Economite" residential and "Lo-Blast" large type models will be demonstrated. New No. 500 "Economite", with a maximum capacity of 500,000 Btu input will be shown.

MILWAUKEE ELECTRIC TOOL CORP., 5316 W. State St., Milwaukee 8, Wis.—Booths 2-814, 2-816

In attendance: Curtis Meyer, R. L. Siebert, Larry Morand.

Exhibiting: "Sawzall"; plumbers' and electricians' right angle drive kit; drills, electric hammers, circular saws.

MILWAUKEE GAS SPECIALTY CO., 730 N. Jackson St., Milwaukee 1, Wis.—Booth 1021

In attendance: P. S. Brant, J. A. Wolff, V. C. Kitzrow, J. H. Thornbery, E. O. Abel, S. L. Kile, D. R. Weidenfeller, W. F. Hoeser.

Exhibiting: "Baso" valves and pilot burners, and featuring new "Actrol" valves.

MINNEAPOLIS-HONEYWELL REGULATOR CO., 2753 4th Ave., S., Minneapolis 8, Minn.—Booths 1046, 1047

In attendance: T. McDonald, J. E. Haines, J. S. Locke, V. D. Wissmiller, R. W. Crysler, E. F. Snyder, R. L. Allen, C. W. Proctor, L. B. Belford, H. R. Canoyer, J. F. Cummiskey, K. L. Wilson, K. W. Schick, L. C. McRoberts, R. M. Locke, T. A. Reed, H. C. Carlsen, Jr., C. C. Cochran, D. J. Peterson, H. D. Bissell, J. A. Young, E. E. Fox, J. B. Daniels, W. Burton.

Exhibiting: Pneumatic, electric and electronic control equipment for heating, ventilating and air conditioning. Of special interest are automatic rate reset for pneumatic systems; electronic humidity control; electronic velocity control; new electronic system combining amplifier and motor in one small unit; complete line of fast acting aquastats; new line of diaphragm gas valves; improved electronic combustion control equipment; electronic "Moduflow" control system.

MITCHELL MFG. CO., 2525 Clybourn Ave., Chicago 14, Ill.—Booths 329, 331, 333

In attendance: Bernard A. Mitchell, E. A. Tracey, Leonard H. Solomon, Howard G. Haas, C. J. Schroeder, Armand Zucker, J. K. Neuhauser.

Exhibiting: Room air conditioners and dehumidifiers (capacities 1/3, ½, ¾ and 1 hp room air conditioners; ⅜ hp dehumidifiers). Room air conditioners with "Weath'r-Dial" which not only cool but heat as well will be featured.

MONARCH MFG. WORKS, INC., 2501 E. Ontario St., Philadelphia 34, Pa.—Booth 1146

In attendance: E. B. Frame, J. M. Carroll, J. C. Underwood, W. M. Fink, C. E. Fink.

Exhibiting: Oil burner nozzles; air mixing equipment, including combustion heads, regulating valves, strainers and water sprays.

MORRISON PRODUCTS, INC., 16816 Waterloo Rd., Cleveland 10, Ohio—Booth 1217

In attendance: Hunter Morrison, Hunter Morrison, Jr., Thompson Morrison, Al. Galava.

Exhibiting: Blower wheels and blowers. Direct drive blower, self-aligning, rubber mounted bearing, will be featured.

MORRISON STEEL PRODUCTS, INC., 601 Amherst St., Buffalo 7, N. Y.—Booth 205

In attendance: Jack Kohnstamm, John K. Farrar, Walter E. Duffy, Samuel Niede, Dave Grant, Clayton Stahlka.

Exhibiting: Complete line of "Mor-Sun" forced warm air furnaces for gas or oil, each model of which can be fitted with a gas or oil burner.

MORSE-SMITH-MORSE CO., 165 Dexter Ave., Watertown 72, Mass.—Booth 2-315

In attendance: John C. Dieselman, Robert P. Johnston.

Exhibiting: "Fitomatic" fusible safety valves and other oil burner accessories.

MOTORSTOKOR DIV., HERSHEY MACHINE & FOUNDRY CO., 153 Cherry St., Manheim, Pa.—Booths 1309, 1311, 1313, 1315, 1317, 1321

In attendance: John D. Wentz, R. F. Loomis, H. B. Menard, John Sheridan.

Exhibiting: Anthracite boiler burner unit; anthracite forced warm air unit; conversion anthracite burners. Crossfeed commercial anthracite burner will be featured.

MUELLER FURNACE CO., L. J., 2005 W. Oklahoma Ave., Milwaukee 15, Wis.—Booths 1237, 1239, 1243

In attendance: H. P. Mueller, F. J. Nunlist, H. P. Mueller, Jr., J. H. Reock, O. J. Ress, N. E. Hill, R. W. Weekes, D. J. Spahr, H. B. McKee, G. A. McDonough.

Exhibiting: "Climatrol" heating, cooling and air conditioning equipment. Incinerator, cooling equipment, and winter air conditioners and boilers will be featured.

MULTI-VENT DIV.—see PYLE-NATIONAL CO.

MYSTIK ADHESIVE PRODUCTS, 2635 N. Kildare Ave., Chicago 39, Ill.—Booth 437

In attendance: William A. Givens, Stanley L. Ostrenga, William J. Miller, James C. Gallagher, John B. Pursley, Jesse E. Lehman, Jr., Russell J. Leander, John K. Leander, Tom W. Leo.

Exhibiting: "Self-Stik Dri-Pipe" hot and cold pipe insulation; cloth and paper tapes.

NAPANEE IRON WORKS, LTD., Ann St., Napanee, Ontario—Booth 2-141

In attendance: W. W. Palm, M. S. Clark, J. R. Matthews.

Exhibiting: Packaged type boilers.

NASH ENGINEERING CO., Wilson Ave., South Norwalk, Conn.—Booth 642

In attendance: I. C. Jennings, E. A. Mead, H. E. Adams, G. B. Wright, J. B. Wright.

Exhibiting: Return line vacuum heating pumps; condensation pumps. A new line of return line vacuum heating pumps providing "high standards of performance, efficiency, and adaptability," will be featured. This line, the type CSM, is offered in a full range of sizes through 100,000 sq ft EDR for operating vacuums up to 20 in. and for discharge pressures from 10 to 70 lb.

NATIONAL RADIATOR CO., 221 Central Ave., Johnstown, Pa.—Booths 302, 401

In attendance: C. M. Baumgardner, J. W. LeRoy, C. J. Philage, R. S. Doherty, Russell Doherty, G. S. Ham, F. D. Thomas, W. D. Braden, L. A. Smith, C. R. Guenther, R. L. Standaert, E. Edelblut, S. Sackol, J. W. Hall, H. W. Williams.

Exhibiting: Cast iron and steel boilers for all fuels; gas boilers; gas unit heaters; hot water and steam unit heaters; non-ferrous baseboard; cast iron and non-ferrous convectors; ferrus fintube convectors; radiators; heating accessories. Gas fired unit heater with steel heating element; "National Packet" all-in-one automatic heating unit and domestic water supply, oil and gas fired; and "National Art" baseboard will be featured.

NELSON PRODUCTS, HERMAN; AMERICAN AIR FILTER CO., INC., 215 Central Ave., Louisville 8, Ky.—Booths 735, 737

In attendance: Richard H. Nelson, Robert W. Nelson, Charles S. Stock, Arthur Hubbard, Richard M. Burbank, Frank Carroll, William Potter, Robert DeLay, Sam Wilson, Harold Meyer, Les Linehan, Hugh Mullaney, J. C. Donaldson, Norman Peterson, Richard Rhodes.

Exhibiting: "Draft-Stop" unit ventilators; propeller fans; propeller fan type unit heaters; "DeLuxe" unit heaters; unit blowers; centrifugal fans. New centrifugal fan design will be featured.

NESBITT, INC., JOHN J., State Rd. & Rhawn St., Philadelphia, Pa.—Booth 2-329

In attendance: J. W. McElgin, H. B. Hedges, W. D. Widerman, K. W. Will, G. S. Rohrer.

Exhibiting: "Sill-Line" radiation and radiation with storage cabinets; heating and cooling coils; baseboard radiation; gas fired unit heaters; "Syncretizer" unit ventilators. The radiation and the gas fired unit heaters are new products, and the radiation with storage cabinets is a new application.

NEW YORK BLOWER CO., 32nd St. & Shields Ave., Chicago 16, Ill.—Booths 1125, 1127

NIAGARA BLOWER CO., 405 Lexington Ave., New York 17, N. Y.—Booth 635

NIAGARA FURNACE DIV., FOREST CITY FOUNDRIES CO., 2500 W. 27th St., Cleveland 13, Ohio—Booths 107, 109

In attendance: W. C. Kremser, I. E. Seith, R. H. Leisenheimer.

Exhibiting: Warm air furnaces for gas and oil. New "Hiboy" and downflow models for closet installation will be featured.

NIAGARA MACHINE & TOOL WORKS, 637 Northland Ave., Buffalo 11, N. Y.—Booths 1110, 1112, 1114

In attendance: L. L. Hock, F. L. Kelsey, R. E. Harwood, W. M. Evarts.

Exhibiting: Air actuated squaring shears; electrically driven squaring shears; foot operated squaring shears; air actuated bar folder; multi-drive power table for rotary operations; high speed circle shear; universal rotary machine rigged for flanging; electrically driven slip roll former hand tools. The air actuated squaring shear and the air actuated bar folder will be featured.

NORGE HEAT DIV., BORG-WARNER CORP., 346 E. South St., Kalamazoo, Mich.—Booths 1031, 1033, 1035, 1037, 1039

In attendance: G. L. Brown, E. J. Effinger, J. M. McNamara, H. F. Oakes, R. E. Rawles, L. J. Studnicky, W. C. Walter, W. B. Johnson, J. W. Pulkinghorn, W. F. Krueger, L. L. Groff, C. S. Davis, Jr.

Exhibiting: Oil and gas-fired equipment. F610 series oil-fired furnaces and COB53 conversion oil burners will be featured.

NORMAN PRODUCTS CO., 1150 Chesapeake Ave., Columbus 12, Ohio—Booths 306, 405

In attendance: D. D. Piper, E. A. Norman, R. G. Dawley, D. A. Ruen, G. P. Mandel, C. A. Reichelderfer.

Exhibiting: Complete line of heating equipment. Year 'round air conditioning, "Three Sixty" unit heater, redesigned and larger size horizontal furnaces, and complete line of upright furnaces will be featured.

NORSE BOILER CO., INC., Stelton Rd., New Market, N. J.—Booth 2-113

In attendance: Paul L. Olesen, W. C. Schwartz, Jack Klotz, Harry Woodruff, Edward E. Weingard, C. M. Wilcox, Jerry Parker, Frank McCusker.

Exhibiting: Vertical tube steel boilers; horizontal tube steel boilers; Scotch marine boilers; baseboard radiation.

NYE TOOL CO., 4120-30 Fullerton Ave., Chicago 39, Ill.—Booth 2-433

In attendance: A. P. Nye, F. L. McIntosh, Allon Erickson.

Exhibiting: Pipe tools. Special emphasis will be placed on continued operation in a power vise of fast operating 1 in. to 2 in. pipe threader using one set of high speed dies, and a power pipe cutter.

OLSEN MFG. CO., C. A., Elyria, Ohio—Booth 406

In attendance: C. A. Olsen, E. P. Hayes, M. H. Klett.

Exhibiting: Horizontal furnaces, gas and oil fired; gas fired unit heaters; cooling equipment; gas and oil conversion burners; counterflow, "Hi-boy" and basement type winter air conditioning equipment, gas and oil fired; gravity furnaces, gas and oil fired. Horizontal furnaces, gas fired unit heaters, gas conversion burners, and cooling equipment will be featured, and there will be a "live" demonstration of a loop type perimeter system using a counterflow winter air conditioning unit.

ORR & SEMBOWER, INC., Morgantown Rd., Reading, Pa.—Booths 2-100, 2-103

In attendance: R. C. Currie, L. A. Roethe, J. F. Keeler, W. B. Firman, S. D. Distelhorst.

Exhibiting: "Powermaster" packaged automatic boilers; "Voriflow" combination air atomizing oil and premixing gas burners.

OWENS-CORNING FIBERGLAS, Nicholas Bldg., Toledo 6, Ohio—Booths 235, 237, 239

In attendance: Wm. Stutts, W. Kuenn, H. Hogendobler, J. McCord, B. McCabe.

Exhibiting: "Dust-Stop" air filters; "Aerocor" insulation; duct insulations; industrial insulations. Feature will be kineoscope of Arthur Godfrey on TV selling filters, plus mechanical display showing "plus value" of "Fiberglas".

PACIFIC STEEL BOILER DIV., 300 Buhl Bldg., Detroit 26, Mich.—Booth 821

In attendance: H. B. Steggall, E. J. Grady, W. E. Evertham, J. A. Callahan, H. Hathaway, H. Guilickson.

Exhibiting: Steel heating boilers.

PARAGON ELECTRIC CO., 1600 Twelfth St., Two Rivers, Wis.—Booths 2-417, 2-419

In attendance: Read W. Eldred, Warren A. Petersen, Harold E. Bond, Wm. C. Leff.

Exhibiting: Time switches.

PATCO MFG. CO., 231 N. Bread St., Philadelphia 6, Pa.—Booth 2-516

In attendance: Roy A. Fetterman, Paul J. Thompson.

Exhibiting: "Radiantair" baseboard.

PATTEN CO., J. V., Sycamore, Ill.—Booths 512, 514

In attendance: Don C. Patten, John H. Patten, A. B. Garman, C. A. Pearce, Wallace Landau, Harry Lloyd, S. R. Roberts, George Zingsheim, E. H. Lambert.

Exhibiting: "Sun Fuel-Master" automatic oil furnaces, forced air and gravity; automatic gas furnaces, forced air and gravity; summer air conditioning units, 2 ton and 3 ton. New 5000 series line of patented gas-oil furnaces incorporating new concept of automatic furnace design, and new self-contained 2 ton and 3 ton residential summer air conditioning units for installation in conjunction with "Sun" furnaces, using the same duct work for heating and cooling, will be featured.

PEERLESS ELECTRIC CO., West Market St., Warren, Ohio—Booth 2-333

In attendance: L. E. Schulein, A. C. Jacobson, E. T. Collins, C. E. Malone, W. B. Forrest, W. A. Curtis, Les Mills.

Exhibiting: Complete line of large and small exhaust fans, utility blowers, "Ventillatic" fans and furnace blowers.

PEERLESS PUMP DIV., 2005 N. Western Ave., Indianapolis, Ind.—Booth 2-437

In attendance: W. T. Harman.

Exhibiting: End suction pumps.

PENN BOILER & BURNER MFG. CORP., Lancaster, Pa.—Booth 2-514

PENN CONTROLS, INC., Goshen, Ind.—Booth 347

In attendance: A. W. Barr, K. W. Cash, R. V. Clark, J. E. Corbett, F. X. Fessler, J. Forbes, H. D. Gray, J. F. Kinney, A. Korte, R. H. Luscombe, E. B. Maire, J. G. Moravec, C. B. Morgan, R. L. Persons, C. P. Pestow, B. Ralph, R. Ratliff, A. L. Rubel, G. O. Sanders, H. C. Shilling, E. Tassin.

Exhibiting: Automatic controls for heating, ventilating and air conditioning. Type 925 gas valve; type 931 gas pressure regulator with vent limiting device; and dual mounted, low voltage heating and cooling thermostats will be featured.

PENNANT CORP., 200 Grant St., S.W. Grand Rapids, Mich.—Booth 1227

In attendance: L. Lobdell, L. F. Oberman, Meyer Weiner.

Exhibiting: Registers and grilles.

PENNSYLVANIA FURNACE & IRON CO., Warren, Pa.—Booths 912, 914

In attendance: R. L. Blodgett, C. S. Andersen, H. J. Harvey, Russ Streff, Reid Olson, B. A. Johnson.

Exhibiting: Gas fired gravity and winter air conditioning furnaces; gas fired water, steam and vapor boilers. New series 11 forced air furnace will be featured.

PERFECTION STOVE CO., 7609 Platt Ave., Cleveland 4, Ohio—Booth 903

In attendance: A. S. Bergschneider, G. A. Crowner, H. W. Dean, H. C. Erikson, Harold Kieter, W. C. Meredith, R. G. Meulenberg, W. M. Potter, T. W. Russell, J. W. Shrank, W. R. Wright.

Exhibiting: New oil burning and gas burning "Hi-Boy" and counterflow furnaces.

PERFEX CORP., 500 W. Oklahoma Ave., Milwaukee 7, Wis.—Booths 1212, 1214, 1216

In attendance: C. E. Lewis, Allen Butler, Maurice Eastin, Robert Engbring, Arthur Kornitz, Douglas DeVos, Harold Hatch, Ed. Schmitt, Hugh Cameron, H. Dale Cook, Harold Wellnitz.

Exhibiting: Thermostats, oil burner primaries, limit controls, fan and limit controls, gas valves, stoker primaries, industrial instruments, appliance controls.

PETRO, 5170 W. 106th St., Cleveland 11, Ohio—Booths 1228, 1230

In attendance: J. R. Crews, C. T. Burg, Dale Wylie, E. C. Webb.

Exhibiting: Residential, commercial and industrial oil burners; residential winter air conditioner oil furnaces; commercial-industrial combination gas-oil burners. Residential winter air conditioner furnaces will be featured.

PETROMETER CORP. — see LIQUIDEPTH INDICATORS, INC.

PITTSBURGH CORNING CORP., 307 4th Ave., Pittsburgh 22, Pa.—Booth 338

PITZ FOUNDRY, INC.—see AMERICAN HYDROVAC DIV.

PLUMBING & HEATING BUSINESS, Grand Central Terminal Bldg., New York 17, N. Y.—Booth 435

Exhibiting: Publication.

PLUMBING & HEATING JOURNAL, 92 Martling Ave., Tarrytown, N. Y.—Booth 2-407

Exhibiting: Publication.

PLUMBING & HEATING WHOLESALER, 92 Martling Ave., Tarrytown, N. Y.—Booth 2-407

Exhibiting: Publication.

PORTABLE ELECTRIC TOOLS, INC., 320-340 W. 83rd St., Chicago 20, Ill.—Booth 2-809

In attendance: George W. Weatherby, Fred S. Sonneborn, John Baker.

Exhibiting: Portable electric tools. Attachments — sanders, polishers, etc. — will be featured.

POWERS REGULATOR CO., 3400 Oakton St., Skokie, Ill.—Booths 428, 430, 432.

In attendance: J. W. Powers, F. A. Murray, D. L. Ladd, K. M. Stevens, E. W. Rietz, E. R. Bowman, T. J. Smith, D. A. MacWatt, E. K. Wagner, G. Fickett, R. G. Lyford, C. C. Quin, R. M. Spencer, E. V. Carlson, C. P. Krantz, G. J. Kraai.

Exhibiting: "No-Pak" radiator valves, "Powerstroke" damper motors, "Unitem" thermostats, "Flowrite" valves will be featured, and "Metalflow" valves, "Accritem" regulators, indicating and recording regulators, water controllers, and thermostatic water mixers will also be shown.

PREFERRED UTILITIES MFG. CORP., 1860 Broadway, New York 23, N. Y.—Booth 142

In attendance: R. S. Bohn, W. H. Bohn, J. S. Kaplan, Kenneth Stevens.

Exhibiting: Unit steam generators (packaged boilers); combination gas oil fired rotary burners; "Draft-a-Justor"; oil burning accessories.

PROPELLAIR DIV.—see ROBBINS & MYERS, INC.

PULLMAN VACUUM CLEANER CO., 33 Allerton St., Boston 19, Mass.—Booth 2-605

In attendance: Robert Berns, Jack Welker, Norm Ruby, L. J. Krause, Mason Emanuels.

Exhibiting: Furnace vacuum cleaner; industrial vacuum cleaner; tools and accessories. Disposable paper filter accordion hose will be featured.

PUR AIR DIV., AMERICAN SOLVENT RECOVERY CORP., 8th & Cassady Aves., Columbus 19, Ohio.—Booths 2-427, 2-429

In attendance: Arthur W. Cox, Sr., William H. Whirl, Arthur W. Cox, Jr., Donald C. Hall, Daniel B. Gartrell.

Exhibiting: Activated, coconut shell carbon equipment for removing odors in inhabited spaces, including "Filter Fold," panel adsorber, and canister, all to be installed in air conditioning systems, and self-contained units to be used in non-air conditioned spaces. Live demonstration of how carbon adsorbs odors will be featured.

PYLE-NATIONAL CO., 1334 N. Kostner Ave., Chicago 51, Ill.—Booth 246

In attendance: G. K. Raider, W. F. Botensten, J. W. Smith, D. I. Packard, E. Kurek, E. Bratko.

Exhibiting: "Multi-Vent" low velocity air diffusing ceiling panels for all types of ceilings. Modular panels for acoustical metal pan ceilings, and a special exhibit showing application and performance, will be featured.

QUINCY STOVE MFG. CO., 825 S. Front St., Quincy, Ill.—Booth 921

In attendance: Herman D. Tow, Clarke T. Welsh, Al Swartzmiller, Maurice Davis, Harvey J. Wilde.

Exhibiting: "Monogram" oil wall furnace and oil space heater. "In-The-Wall" oil wall furnace vaporizing burner will be featured.

RCS TOOL SALES CORP., 200 Moen Ave., Joliet, Ill.—Booths 326, 328

In attendance: Francis S. Russell, Thos. M. Sweeney, Dale Davis, Carl Longanecker, Ray Westlund, Jr., George Schultz.

Exhibiting: "Super Saw" reciprocating, roughing-in, portable power attachment; "Korner King" right angle drill attachment, which will be featured.

RADIANT-RAY RADIATION, INC., 900 W. Main St., New Britain, Conn.—Booth 2-620

RADIANT UTILITIES CORP., 8817 18th Ave., Brooklyn 14, N. Y.—Booth 321

In attendance: Jacob G. Goldberg, Julius S. Goldberg, Arthur A. Marcus, Joseph Bloom.

Exhibiting: Oil burners and warm air furnaces (winter air conditioners).

RADIATION FURNACE CORP., 230 Bond, Benton Harbor, Mich.—Booth 520.

In attendance: Robert Volk, Sidney Volk, Gus Paul.

Exhibiting: Oil and gas warm air furnaces.

RALPH MFG. CO. INC., 927 Broad St., Wadsworth, Ohio—Booths 1233, 1235

In attendance: Ralph T. Jenkins, Raymond G. Jenkins, Carl L. Jenkins, A. J. Ralph, E. M. Jenkins, B. J. Jenkins.

Exhibiting: Complete line of furnace pipe and fittings, including new forced air 4 in. system, which will be featured.

RANDALL GRAPHITE BEARINGS, INC., Greenlawn & Lake Sts., Lima, Ohio—Booth 1215

In attendance: W. E. Dickerson, K. W. Strunk, R. C. Jamison, Harry Koeckritz, Howard Dickerson, J. F. Pikal, H. C. Peterson, Virgil Fitch, Ray Chaney.

Exhibiting: Self-aligning, self-lubricating pillow blocks; flange units; graphite bearings; bronze bushings; safety collars and washers. New flange sleeve bearing unit, self-aligning, self-lubricating, available with sintered or graphited bearings, and special prepacked, lubricated for life bearings suitable for operating temperatures of −10 F to 165 F, especially designed for heating, ventilating and air conditioning equipment, will be featured.

REDMOND CO., INC., Owosso, Mich.—Booth 2-421

REFRIGERATION APPLIANCES, INC., 901-923 W. Lake St., Chicago 7, Ill.—Booth 2-127

REMINGTON ARMS CO., INC., 939 Barnum Ave., Bridgeport 2, Conn.—Booth 2-126

In attendance: C. C. Clair, C. A. Nash, C. J. Turner.

Exhibiting: Stud driver. Duct suspension from concrete ceiling, special guards for conduit clips, and "instant fastening" of light gage metal to steel and concrete will be featured.

RESEARCH PRODUCTS CORP., 1015 E. Washington Ave., Madison, Wis.—Booth 421

In attendance: A. W. Brown, John G. Schutz, P. N. Dutton, Carl B. Rowe, H. E. Whelpley, K. H. Lindquist.

Exhibiting: Replacement and washable air filters; odor removal filters, washable grease filters; paint arrestors; special applications of a wide range of types, sizes and shapes. Complete line of panel air filters with new applications of new filtering techniques, flexibility in design being the primary aim, will be featured.

RHEEM MFG. CO., 570 Lexington Ave., New York 22, N. Y.—Booth 2-438

In attendance: R. C. Anderson, A. F. Cassidy, V. J. Heinis, E. J. Hutchings, E. F. Malarkey, J. J. Nangle, W. H. Olson, T. L. Schwertfeger, M. A. Straub.

Exhibiting: Gas and oil burning furnaces; gas fired wall heaters and water heaters. "Coppermatic" water heater, oil burning furnace, gas fired counterflow furnace, and gas fired wall heater will be featured.

RIDGE TOOL CO., 400 Clark St., Elyria, Ohio —Booths 2-118, 2-120

In attendance: E. C. Bliss, L. C. Richardson, R. C. Chamberlin, M. M. Fried, W. L. Parcell.

Exhibiting: Pipe tools. New "500 Ridgid" pipe and bolt threading machine will be featured.

RITTLING CORP., 1202 Rand Bldg., Buffalo 3, N. Y.—Booth 446

In attendance: F. W. Thompson, F. W. Helikson, J. B. Howard, H. F. Haldeman, Geo. Washington, Jr., B. G. Peterson, B. R. Peterson, H. J. Lippke, F. L. Nelson, E. B. Nickerson, W. G. Mussun, Jr., Reaver Culbertson, Bryce Byard, Oliver Holmes, N. T. O'Rourke, J. Swanson, G. R. McKenzie, J. O. Moore, H. G. Richardson, Jr., J. L. Harvey, C. R. Bredeson, J. B. Rittling, R. W. Rittling, C. P. Rittling, R. J. Carter.

Exhibiting: Unit heaters; baseboard heating; finned tube convector radiators; cabinet convectors; "Sil-Type" heating. "Sil-Type" heating and improved new type of baseboard heating will be featured.

ROBBINS & MYERS, INC., PROPELLAIR DIV., 1345 Lagonda Ave., Springfield, Ohio Booths 2-815, 2-817

In attendance: M. L. Aitken, W. J. Helmer, E. J. Stone.

Exhibiting: Industrial ventilating fans (roof ventilators, vaneaxial, direct connected); "All-Weather" motors; attic fans and commercial fans.

ROBERTS-GORDON APPLIANCE CORP., 44 Central Ave., Buffalo 6, N. Y.—Booths 414, 416, 420

In attendance: W. Stuart Gordon, Jr., L. C. Smyth, R. I. Warnecke, W. E. Davis, R. T. Huyck, Edw. Neumann, R. G. Budden, John Crim, Robert Keller.

Exhibiting: Gas conversion burners, combination gas-oil conversion burners, hot water boiler, forced warm air furnace, "Hi-Boy" forced warm air furnace, "Nordensson" type gas conversion burner and combination gas-oil conversion burner; gas unit heater. Combination gas-oil burners for domestic and industrial use will be featured.

ROBERTSHAW-FULTON CONTROLS CO.—see FULTON SYLPHON DIV.

ROME-TURNEY RADIATOR CO., 109 Canal St., Rome, N. Y.—Booth 2-319

In attendance: William L. Lynch, John J. Boylan, Edwin J. Parry, E. L. A. Forster, Joseph M. Shannon, Francis M. Larkin, Thomas Murphy.

Exhibiting "ROCOP" convector radiators; "Ro-Fin" baseboard radiation.

ROYAL HEATERS, INC., 1024 Westminster Ave., Alhambra, Calif.—Booth 527

In attendance: Hal G. Merkel, Leo Glascock, Russ Smith, J. H. Scruton, R. T. Lowrie.

Exhibiting: "Jet Flow" heating equipment. New line of forced air furnaces, conventional counterflow for natural manufactured and LP gases, will be featured.

SARCO CO., INC., Empire State Bldg., New York 1, N. Y.—Booths 1201, 1202

In attendance: R. W. Cumming, L. Barfus, M. J. Marion, G. B. Burke, C. E. Brakenridge, R. L. Stewart, E. G. Avery, D. E. Shrader, O. W. Clark.

Exhibiting: Thermostatic, bucket, liquid expansion, and float-thermostatic steam traps; radiator valves and traps; water blenders; temperature regulators. "Sarcotherm" weather compensating control systems will be featured.

SCHNACKE INC., 1107 N. Governor St., Evansville, Ind.—Booth 2-201

Exhibiting: Compressors and condensing units, 5 to 60 hp. Home air conditioner package unit, 3-5 ton, a new product, will be featured.

SCULLY SIGNAL CO., 88 First St., Cambridge 41, Mass.—Booth 504

In attendance: Frank P. Scully, Carl A. Goddard, A. F. Gray, F. P. Scully, Jr., W. G. Rowell, Harold Forrest.

Exhibiting: "Ventalarm" signals and gages. Two new devices are expected to be ready for showing.

SEQUOIA MFG. CO., 1000 Brittan Ave., San Carlos, Calif.—Booth 2-139

In attendance: J. V. Dean, Art. Theobold, Allison Scott, Howard Patterson, Bill Webster, Bill Dunbar, John Davis, Roger Lauback, Mac Stransky.

Exhibiting: Three types of gas forced air furnaces — horizontal, "Closet'eer", and new reverse flow.

SERVEL, INC., Evansville 20, Ind.—Booths 1129, 1131, 1133

In attendance: John A. Gilbreath, H. C. Pierce, F. A. Grossman, J. O. Yund, R. C. Marbach, J. M. Townsend.

Exhibiting: Gas-, oil- and steam-operated all-year air conditioners; 25 ton water chiller.

SHEET METAL WORKER, 92 Martling Ave., Tarrytown, N. Y.—Booth 2-407

Exhibiting: Publication.

SIEMON MFG. CO., 1819 Holmes St., Kansas City 8, Mo.—Booth 2-404

In attendance: Chas. D. Jones, R. H. Siemon, M. J. Murray, Roland W. Brown, Chas. Byrum, Gerald Schwarz, Kenneth J. Hilsenbeck.

Exhibiting: Complete line of power and atmospheric gas and combination gas-oil burners. New power-flame forced draft gas burners and eight models of power type combination gas-oil burners—gun type design, electronically controlled, factory wired and shipped completely assembled — will be featured.

SKUTTLE MFG. CO., 4099 Beaufait Ave., Detroit, Mich.—Booth 2-819

SMITH CORP., A. O., P. O. Box 584, Milwaukee 1, Wis.—Booth 1340

In attendance: J. V. Pepin, F. S. Cornell, S. E. Wolkenheim, L. H. Hoelter, D. A. LeRoy, D. D. Williams, J. W. Long, G. Fohey.

Exhibiting: Volume water heaters; warm air furnace; "Permaglas" water heaters; gas conversion burners; gas-fired boilers. Gas fired warm air furnace will be featured.

SMITH CO. INC., H. B., 57 Main St., Westfield, Mass.—Booths 217, 221

In attendance: Stanley K. Smith, John E. Reed, A. L. Lawrence, T. C. O'Connor.

Exhibiting: "Smith Century" gas boiler; No. 100 oil boiler-burner unit; No. 44 "Mills" boiler; "Sterling" extended finned surface radiation. The new gas fired unit will be introduced at the show, which will be the first showing of this new product.

SOUTHWEST MFG. CO., P. O. Box 28, Aurora, Mo.—Booth 2-340

In attendance: B. J. Hart, F. P. Munsinger, Rudie Lorenz, W. C. Blackwell, B. L. Clarke, Conrad Coulter, Del Ramey, Albert R. Smith, M. L. Queen, F. W. Siffert, C. M. Dillon, Ray W. Deeks.

Exhibiting: Gas fired floor furnaces; gas fired wall heaters; and featuring gas fired forced air furnaces.

SPARKLER MFG. CO., Lake St., Mundelein, Ill.—Booth 2-920

In attendance: G. Harry De Graw.

Exhibiting: Filters for fuel oil for domestic and industrial installations.

SPENCER THERMOSTAT DIV., METALS & CONTROLS CORP., 34 Forest St., Attleboro, Mass.—Booth 720

In attendance: V. G. Vaughan, J. Ottmar, F. Appleton, J. Bagnall, J. Derby, R. Glidden, C. Grube, B. Haun, E. Jastram, N. Naylor, E. Kurtz, T. O'Keefe, R. Peck, N. Curtis, A. White, W. Kuehl, A. Payette, Jr., U. Savolainen, F. Stearns, R. Morse, W. Peirce, R. Mawney, J. Duffy, J. Moorhead, J. Rowland, R. Sayers, F. Oshner.

Exhibiting: "Klixon" hermetically sealed defrost thermostat; dome mounted protectors for hermetics; motor starting relays; snap-acting thermostats; circuit breakers; safety shutoff valves for gas refrigerators; "Truflex" thermostat bimetal; electrical contacts. New composite and clad metals, will be featured.

STAINLESS & STEEL PRODUCTS CO.—see CERTIFIED FURNACE CO.

STANDARD STAMPING & PERFORATING CO., 3131 W. 49th Pl., Chicago 52, Ill.—Booth 317

In attendance: William V. Ramquist, Lloyd Stone, Andrew Lavella.

Exhibiting: Registers; grilles; perforated metals. Perimeter baseboard and floor registers will be featured.

STEEL PRODUCTS ENGINEERING CO.—see COMBUSTIONEER DIV.

STEPHENS-ADAMSON MFG. CO., Ridgeway Ave., Aurora, Ill.—Booth 2-806

In attendance: C. B. Hurd, C. F. King, G. I. Marsh, R. C. Calvin.

Exhibiting: "Sealmaster" ball bearing units. Zone hardened inner race on units which leaves end of race soft for better set screw holding, and induction hardening around ball path only on inner race, will be featured.

STEWART MFG. CO., INC., Grove Ave., Cedar Grove, N. J.—Booth 530

In attendance: Fred J. Stewart, Russell D. Anderson, William J. Fembleaux.

Exhibiting: Air conditioning registers and grilles and air volume controls. "Scoopmaster", combining "Scooptrol" and outlet, will be featured.

STEWART-WARNER CORP., SOUTH WIND DIV., 1514 Drover St., Indianapolis 7, Ind.—Booths 926, 928

In attendance: W. E. Judd, R. F. DeVaney, Gus Wolf, John Gregg, Robert A. Olsen, William W. Pace, Robert C. Overmyer, Frank A. Ryder, George Allen, Joseph P. Boland, Max J. Anthony, Cecil A. Patrick.

Exhibiting: "Saf-Aire" wall heaters of 14,000, 20,000 and 30,000 Btu per hr capacities.

STRATTON & TERSTEGGE CO., INC.—see ANCHOR DIV.

STRONG, CARLISLE & HAMMOND CO., 1392 W. 3rd St., Cleveland, Ohio—Booth 2-310

In attendance: S. E. Adams, H. H. Maltbie, L. J. Lowden, H. T. Brazier, J. A. Rodeno, R. L. Clark.

Exhibiting: Steam traps; reducing valves; strainers; separators. "Borgana" boiler water treatment and "Hi-Cap" steam traps will be featured.

STURTEVANT DIV., WESTINGHOUSE ELECTRIC CORP., Hyde Park, Boston, Mass.—Booth 814

SUNDSTRAND ENGINEERING CO., 1325 Seventh St., Rockford, Ill.—Booth 941

In attendance: R. H. Gustafson, A. H. Rutledge, Wayne Hallinan.

Exhibiting: Complete line of pressure type oil burners.

SUNDSTRAND MACHINE TOOL CO., HYDRAULIC DIV., 2421 11th St., Rockford, Ill.—Booths 115, 117

In attendance: C. W. Lang, L. H. Schuette, W. G. Jarvis, B. L. Soderberg; J. F. Rosenthal, O. E. Mayfield, J. F. Griffey, B. F. Olson, W. R. Kiefer, R. E. Stevens, B. L. Douglass, L. T. Stoyke, S. Ferraro, R. J. Murphy, R. W. Erikson, Paul Johnson, C. L. Sadler, Charles Wells, A. C. Kaser.

Exhibiting: Fuel units. New low pressure air-oil fuel unit will be featured.

SUN-RAY BURNER MFG. CORP., 139-24 Queens Blvd., Jamaica, N. Y.—Booths 2-424, 2-426, 2-428

In attendance: Martin Sones, Robert Adcock, Alfred Luft, Alfred Metzger, Gabe Marin, Don Caldwell, Frank Sieffert, Chick Meehan, Lester Baughman.

Exhibiting: Complete line of oil burners ranging in size from ½ to 25 gph in both conventional and models incorporating the Shell combustion head. New Model VS burner, under fire, will be featured.

SURFACE COMBUSTION CORP., 2375 Dorr, Toledo 1, Ohio—Booths 1337, 1339, 1343

In attendance: H. C. Gurney, R. A. Bell, W. J. Grover, C. C. Owen, L. J. Monahan, R. B. Thornburgh, W. R. Egan, H. A. Gross, A. Baker, F. S. Hamer, H. T. Gates, G. W. Stark, T. J. Langan, J. W. McAfee, J. G. Robinson, R. R. Ramsay, W. M. Adams, E. E. Barr, R. A. Caylor, C. H. Langendorf, R. A. Reed, R. B. Hoover, R. R. Sandusky, E. J. Michalak, L. Schaefer, S. F. Schultz, A. G. Overcashier, W. D. Shoemaker, R. E. Ireland, F. H. Adams, C. B. Phillips.

Exhibiting: Oil and gas fired winter air conditioners; hot water and steam boilers; unit heaters. Horizontal winter air conditioner will be featured.

SUTTON CORP., O. A., VORNADO DIV., 1812 W. 2nd St., Wichita, Kans.—Booth 429

In attendance: Austin Rising, Earl H. Renfro, Fred Kaths, Allan B. Chardrow, Ray Thompson.

Exhibiting: "Vornado" room air conditioners; air circulators, desk and pedestal type; window fans, turnabout, reversible; heater fans. New ½ hp room air conditioner will be featured.

SYNCROMATIC CORP., 1141 10th St., Watertown, Wis.—Booth 721

In attendance: R. C. Jaye, H. M. Stillman, J. F. Hirtz, J. S. Sullivan, G. L. Day, J. W. Hatch, E. R. Zobel, L. H. Troeller, G. M. Galloway.

Exhibiting: Steel warm air heating equipment (gas, oil and coal), both residential and industrial; oil burners.

TACO HEATERS, INC., 137 South St., Providence 3, R. I.—Booths 1027, 1029

In attendance: J. H. White, J. R. Murphy, E. T. Houlihan, J. Balter, R. T. Schoener, R. T. Angevine, W. E. Johnson, J. W. Falle, and representatives of Fenner & Potvin, Inc.

Exhibiting: Water heaters; chillers; air valves; circulators; tempering valves; venturi; relief and reducing valves; flow check valves; "Air Scoop;" "Paneltrol;" and "Tacomatic". "Air Scoop" will be shown in operation to demonstrate what it does.

TANN CORP.—see CONGRESS DRIVES DIV.

TECUMSEH PRODUCTS CO., Tecumseh, Mich.—Booth 2-501

In attendance: L. W. Larsen, F. G. Purcell, D. J. Bowen, A. S. Russell, M. A. Shantz, G. B. Boone, G. I. Boone, Jack Swain, R. T. Smith, J. E. Smith, Ralph Hiatt.

Exhibiting: ¼, 1, 1½ and 3 hp hermetically sealed refrigeration compressors; plastic operating models and cutaways. 3 hp hermetic compressor designed for year around air conditioning systems will be featured.

TEMCO, INC., Nashville 9, Tenn.—Booth 547

THATCHER FURNACE CO., Center St., Garwood, N. J.—Booth 634

In attendance: C. Sahler, F. L. Cowell, M. C. Beard, R. M. Cook, W. J. Kihn, G. J. Caharack, W. White, H. Sparks, C. Allen, A. MacMillan, J. Kelly, Ray Gaebler, Ralph Gaebler, C. Keyes, L. Baughman, J. C. Meehan, J. Daly, F. W. Sieffert, H. S. Gibbard.

Exhibiting: Oil fired and gas fired winter air conditioners, gas fired gravity furnaces, and oil fired and gas fired boilers. Horizontal gas fired winter air conditioner will be featured.

THRUSH & CO., H. A., Peru, Ind.—Booths 2-409, 2-411

In attendance: E. D. Noland, W. C. Miller, R. Lowe, T. G. Haupt, G. H. Fox.

Exhibiting: Complete line of forced circulation flow control system of hot water heat; low and high pressure reducing and relief valves; dual control units, cast iron and bronze, adjustable and nonadjustable; one pipe supply tees and electrical controls. New horizontal circulator and ASME low pressure relief valve will be featured.

TILO ROOFING CO., INC.—see GLASFLOSS DIV.

TIMKEN SILENT AUTOMATIC DIV., TIMKEN-DETROIT AXLE CO., 209 E. Washington St., Jackson, Mich.—Booths 332, 334, 336

In attendance: C. A. Cooper, R. M. Marberry, E. H. Haugen, F. H. Huber, K. O. Ralphs, W. J. Chappell.

Exhibiting: Gas-fired and oil-fired heating equipment: conversion burners, furnace-burner and boiler-burner units; oil-fired domestic water heaters. Complete new line of gas-fired forced warm air furnaces will be introduced, consisting of three counterflow units from 75,000 to 125,000 Btu input; six low furnace units and six high furnace units, each ranging from 75,000 to 200,000 Btu input.

TITUS INC., P. O. Box 598, Waterloo, Ia.—Booth 2-520

In attendance: R. W. Titus, D. L. Titus, J. S. Smith, J. L. Canady

Exhibiting: #50, #100 and #150 perimeter diffusers; T-700 series "No-Vision" door and partition grilles; #1001 return air grilles. The new perimeter diffusers for residential heating and cooling will be featured.

TITUS MFG. CORP., 113 E. 8th St., Waterloo, Ia.—Booth 2-200

In attendance: Don L. Titus, Robert W. Titus, J. D. Davis, E. F. Averill, J. S. Smith, E. B. Boston, R. B. Hudson.

Exhibiting: "Airfoil" air conditioning registers and grilles. New No. 100 perimeter diffuser for residential combined heating and cooling work, and new complete extruded aluminum grille, will be featured.

TORRINGTON MFG. CO., 70 Franklin St., Torrington, Conn.—Booths 410, 412

In attendance: Dudley B. Robinson, Roger T. Lyman, Merrill B. Hunting, Archibald C. Doty, Jr., Leonard C. Lindstrom.

Exhibiting: Fan blades and blower wheels, and featuring new "slinger-ring" fans and new "LU" one-piece fan.

TRANE CO., La Crosse, Wis.—Booths 615, 627

In attendance: Thomas Hancock, E. A. Cline, A. C. Menke, C. R. Connor, C. L. Ringquist, R. E. Haskins, R. S. Knowles, H. C. Rooks, W. C. Dackis, M. L. Hoglund, G. E. Hicke, R. E. Lee, V. E. Bushnell, R. G. Lubinsky, L. R. Fuller, F. Sontag, L. Scafe, and others.

Exhibiting: Centrifugal water chiller "CenTra-Vac"; reciprocating compressors; reciprocating water chillers; self-contained air conditioners; unit air conditioners "Climate Changers"; centrifugal fans; baseboard; convectors; finned radiation, gas unit heaters; propeller unit heaters; blower unit heaters; projection unit heaters; unit ventilators; steam specialties; hot water products; air conditioning systems. Hermetic compressor; air reducer for hot water systems; two and three row wall-fin cabinets and grilles; collection of air conditioning equipment in which all refrigeration piping is done at factory; centrifugal water chiller, self-contained units; reciprocating water chiller — unit air conditioner combination; self-contained air conditioners; and self-contained air conditioner with built-in evaporative condenser will be shown in operation.

TRERICE CO., H. O., 1420 W. Lafayette Blvd., Detroit 16, Mich.—Booths 2-414, 2-416

In attendance: Frank Barclay, Herbert Jones, S. B. Mercer, J. L. Brackett, H. M. Trerice.

Exhibiting: Thermometers; temperature and pressure controls; compressed air filters; steam traps; pressure gages. Electric contact temperature controller will be featured.

TRION, INC., 1000 Island Ave., McKees Rocks, Pa.—Booths 135, 135, 137

In attendance: Edgar W. Meyers, Jr., George F. Landgraf, Paul W. Aitkenhead, John W. Frazier, Russell W. McGuire, William R. Murdock, John M. Newton, Richard E. Sweitzer.

Exhibiting: Complete line of electronic air cleaners for industrial, commercial and residential applications. A special smoke device demonstrating the principle of electrostatic precipitation will be shown, and a continuous demonstration of the built-in water washing system on an industrial unit will be given.

TURB O TUBE FURNACE INC., 204-208 Rhode Island St., Buffalo 13, N. Y.—Booth 209

In attendance: J. B. W. Carmichael, D. L. Haynes, E. G. Kinkel.

Exhibiting: Forced warm air furnaces: hi-boys, lo-boys; suspended models; gas models. Oil fired counterflow hi-boy will be featured.

TUTHILL PUMP CO., 939 E. 95th St., Chicago 19, Ill.—Booth 2-214

In attendance: H. T. Kessler, J. D. Young, R. H. Clarke, H. J. Deiters, C. L. White.

Exhibiting: Model 30A5G "Fuelstat" for domestic oil burners; model SU slow speed heavy oil units for industrial oil burners.

TUTTLE & BAILEY, INC., Corbin Ave., New Britain, Conn.—Booth 2-305

In attendance: J. H. Smart, W. L. Lipski, R. S. Rickabaugh, R. D. Tutt, H. H. Van Epps, F. W. Adams, W. L. Batchelor, L. B. Wilson.

Exhibiting: Grilles; registers; dampers, ceiling diffusers; high pressure air diffusers; copper convectors; fin tube radiation; baseboard convectors. New style adjustable pattern control diffusers, high pressure air diffusers, opposed blade damper, fin tube radiation, and baseboard convectors will be featured.

XXTH CENTURY H. & V. CO., 96 Ira Ave., Akron 1, Ohio—Booths 111, 113

In attendance: R. K. Long, J. G. Kerch, C. E. Tomlin.

Exhibiting: Gas and oil fired furnaces. New style of oil fired reverse flow furnace will be featured.

TYPHOON AIR CONDITIONING CO., INC., 794 Union St., Brooklyn 15, N. Y.—Booths 1322, 1324, 1326

In attendance: Don V. Petrone, John E. York, Peter T. Wotton, Arthur H. Farr, Sam F. Graziano, Larry D. Spence.

Exhibiting: Packaged air conditioning equipment; residential heating and cooling unit; "Prop-R-Temp" heat pump. Current trend toward the residential year 'round air conditioning market will be featured, and heating and cooling unit for homes with "One-Button" control, which enables the user to switch from heating to cooling without manipulating dampers or without damper motors and controls, will be displayed at a major trade exposition for the first time.

U. S. MACHINE CORP., Lebanon, Ind.—Booths 1328, 1330, 1332, 1334, 1336, 1338

UNITED STATES AIR CONDITIONING CORP., Como Ave. Southeast at 33rd, Minneapolis 14, Minn.—Booth 2-228

In attendance: D. E. Feinberg, L. P. Hanson, Wm. Moiselle, M. A. Stuart, T. J. Waddell, R. D. McLain, L. R. Gordon, C. F. Hawkinson, E. R. Tanner, R. A. Nelson, C. S. Kessler, M. L. Benson, R. I. Tanner, A. J. Mallinckrodt, J. McMillin, H. Fessler, E. J. Conley.

Exhibiting: Model ECU-87150 evaporative condenser; Model HC-300 "Modu-aire" heating and cooling unit; Model 23100 gas fired unit heater; Model DRK-20B dual circuit refrigerated "Kooler-aire"; Model 8120 home air conditioner; Model 7750E store conditioner; Model 7975D2 window type room air conditioner; Model CH 18 housed ventilating set. Home air conditioner will be displayed for the first time, and exhibit also includes 1953 window unit which has been completely redesigned, as well as new evaporative condenser line and gas fired unit heaters.

UNITED STATES RADIATOR CORP., 300 Buhl Bldg., Detroit 26, Mich.—Booth 620

In attendance: S. Wolpert, J. Finn, F. Mulcahy, Jr., R. Walker, J. McNulty, R. Strausser, W. F. Hershey, J. T. Kos, J. A. Froncek, C. T. Lawrence, A. X. Bergeron, L. J. Finn, E. Keim.

Exhibiting: Cast iron boilers; cast iron radiators; radiant baseboard; warm air furnaces.

UNITED STATES RADIATOR CORP.—also see PACIFIC STEEL BOILER DIV.

UNITED STATES REGISTER CO., Battle Creek, Mich.—Booths 431, 433

In attendance: Charles J. Pearson, A. A. Stagg, Harry G. Hollman, E. P. Kromdyk.

Exhibiting: Complete line of gravity and air conditioning registers for heating, ventilating, cooling, etc., and registers for perimeter heating and general heating and ventilating.

UNITED STATES STEEL CO., 525 William Penn Pl., Pittsburgh 30, Pa.—Booths 1012, 1014, 1016

UNIVERSAL DIFFUSER CORP., 890 Whittier St., New York 59, N. Y.—Booth 2-107

In attendance: Charles Davies, Alfred Stern, Robert Stern, B. A. Kane, H. Himelblau.

Exhibiting: "Flexiflo" air diffuser, with an effective area "that is 100 percent variable and thus permits perfect volume control without requiring additional dampers." One of the diffusers has an automatic control on it that permits variation of volume through thermostats or humidistats. Exhibit will show diffusers in action; automatic controls will open and close the diffusers in order to demonstrate their advantages.

UTILITY APPLIANCE CORP., 4851 S. Alameda St., Los Angeles 58, Calif.—Booth 2-701

In attendance: C. F. Cushing, Bernard Harris, Richard Petersen, T. M. Northcote.

Exhibiting: Complete line of gas fired heating equipment; evaporative air coolers; centrifugal blowers. 90,000 Btu horizontal forced air furnace will be featured.

VAN-PACKER CORP., 209 S. LaSalle St., Chicago 4, Ill.—Booth 1325

In attendance: R. F. Van Alstyne, L. Packer Brown, Ken Mayer, Wayne Bradfield, Joe Hemingway.

Exhibiting: All fuel packaged masonry chimney.

VAPOR HEATING CORP., 80 E. Jackson Blvd., Chicago 4, Ill.—Booth 2-130

In attendance: L. H. Gillick, George M. Egart, Don Heaton.

Exhibiting: "Vapor-Clarkson" steam generator, a complete automatic package steam generator which develops 200 lb steam pressure in 2 min from cold water and makes 1000 to 5000 lb per hr of steam per hr at from 10 to 600 lb steam pressure; steam generator which produces 500 lb per hr of steam at 10 to 300 lb pressure; mercury contact thermostats used to control temperatures in railroad trains, jet airplanes and industry and that anticipate temperature change; other heating equipment.

VELOCITY POWER TOOL CO., 7505 Thomas Blvd., Pittsburgh 8, Pa.—Booth 2-435

In attendance: William G. Kulesz, William S. McConnell.

Exhibiting: "Velocity Power" driver and "Century Torch-O-Matic" gas gun.

VIBRATION ELIMINATOR CO., 10-20 47th Ave., Long Island City 1, N. Y.—Booths 911, 913

In attendance: S. Kahn, M. Miller, E. Vieira, L. Imbert.

Exhibiting: Units and bases for the elimination of vibration transmission from machinery.

VIKING AIR CONDITIONING CORP., 5600 Walworth Ave., Cleveland 2, Ohio—Booths 325, 327

In attendance: Marion Levy, Frank Gibbons, Dick Gang, M. F. Mackenzie, Tom McIntyre, Jack Green, Lowell McCord, Jack Carman, Woody Faison, George Gould, Gary Baker, Maurice Esser, Harry Winter, Herbert Klein, Philip Borkat.

Exhibiting: Blower packages; blower assemblies; attic and window fans; window coolers; central cooling units; humidifiers. The window cooling units, central cooling units, and attic and window fans will be featured.

VIKING MFG. CORP., 1747 Chester Ave., Cleveland, Ohio—Booths 1135, 1137, 1139

In attendance: William R. Frasher, E. J. Pratt, James T. Louderback, Evan Steim, Willard Huff.

Exhibiting: Gas and oil furnaces; air conditioning units; "Flatpak" ductwork; registers; boilers; water heaters. New small oil boiler, new low-cost oil furnace, and new furnace and air conditioning unit will be featured.

VILTER MFG. CO., 2217 S. 1st St., Milwaukee 7, Wis.—Booth 2-106

In attendance: M. F. Tokach, J. F. Heil, A. O. Vogel, H. H. McKinnies, J. B. Kupfer.

Exhibiting: Refrigeration equipment, including compressors, condensers, receivers, etc.

VORNADO DIV.—see O. A. SUTTON CORP.

VULCAN RADIATOR CO., 26 Francis Ave., Hartford 6, Conn.—Booth 1116

In attendance: John H. Ehn, Thomas L. Arnold, Richard B. Sweet, Joseph D. Pierce, John B. Rita, James D. Zonino.

Exhibiting: Extended fin surface radiation (ferrous and non-ferrous); commercial "Linovector"; baseboard "Radivector". A new "Linovector" enclosure will be featured with knob operated damper and new cover support brackets.

WAGNER ELECTRIC CORP., 6400 Plymouth Ave., St. Louis 14, Mo.—Booth 2-138

In attendance: L. C. Dobrunz, H. N. Felton, A. C. Allen, E. O. Krueger, J. L. Pasher, W. E. Prewitt, J. G. McClinton, J. T. Kemper, F. H. Vocks, R. E. Bryant, M. J. Scheid, L. A. Murphy, J. J. Scheid, W. H. Gilster, P. D. Young, S. R. Snyder, F. T. Coup, G. B. Minx, G. L. Neely, R. W. Larson, T. A. Wallace, M. H. Nelson, M. B. Atkinson, R. Vassier.

Exhibiting: Electric motors.

WALKER MFG. & SALES CORP., 1701-17 Penn St., St. Joseph 1, Mo.—Booth 2-233

In attendance: M. O. Land, Lakin Meade, Andrew Ziph, R. D. Denning.

Exhibiting: Draft regulators for space heaters; draft controls for furnaces; draft controls for industrial boilers; venturi-top chimney caps; roof ventilators. Complete size range of draft indicating draft regulators and venturi chimney caps will be featured.

WALTON LABORATORIES, INC., 1186 Grove St., Irvington 11, N. J.—Booths 923, 925, 927

In attendance: William Feldermann, John B. Feldermann, J. R. Lewis.

Exhibiting: Humidifying equipment; dehumidifying equipment; humidity controls; dehumidifying control; indicators. "Sherwood" table model humidifier designed for small homes or apartments, "Aqua-Sorber" dehumidifier with 1/5 hp motor and equipped with automatic control will be featured, as will a new atomizing type furnace humidifier to be shown for the first time.

WATERMAN WATERBURY CO., 1621 N. E. Jackson, Minneapolis 13, Minn.—Booth 834

In attendance: Harry Cross, Dave Sedgwick, Stuart Smith, Ben Schwarz, Tom Delaney, Roy Lonson, Ira Metcalf, Fritz Legler, Frank McConnell, Bill Morrisey, Bob Carlson, Jack White, Keith Anderson, Jim Bazille, Brighton Eddy, Everett Borst.

Exhibiting: Year 'round air conditioning unit; oil and gas fired furnaces. A year 'round air conditioning and cooling unit will be introduced.

WATTS REGULATOR CO., 10 Embankment St., Lawrence, Mass.—Booth 2-422

In attendance: George B. Horne, Bernard Alexander, Benjamin G. Robertson, Ralph W. Giffin, Mike Mercury, Richard Benzien, Robert Sweeney, Ernie Sanger, Harold Schmidt, Joseph M. Beglen.

Exhibiting: Complete line of heating and plumbing safety valves and controls, including temperature and pressure relief valves pressure reducing valves, water tempering valves, vacuum relief valves, siphon vacuum breakers, feedwater pressure regulators, ASME boiler safety relief valves, dual control units for water boilers, low water cutoffs and boiler water feeders. New high pressure boiler water feeder and diaphragm operated steam pressure reducing valves will be featured.

WAYNE HOME EQUIPMENT CO., INC., 800 Glasgow Ave., Fort Wayne 4, Ind.—Booth 2-136

In attendance: B. G. Duer, C. A. Copeland, J. M. Messinger, P. W. Gotsch, A. A. Jeffrey, Jack Nace, N. G. Berghoff, W. I. Chapel, J. A. Fletcher, W. I. Chapel, B. L. Clarke, E. W. Defries, L. A. Oswald.

Exhibiting: Oil burners, gas burners; oil and gas furnaces. "Residential" 1953 oil burner will be featured.

WEBSTER & CO., WARREN, 17th & Federal Sts., Camden 5, N. J.—Booths 409, 411, 413, 415

In attendance: H. F. Marshall, D. F. Bennett, N. W. MacNichol, B. F. Lerch, L. H. Plum, D. E. Morgan.

Exhibiting: Steam and hot water heating systems and equipment and traps, valves, steam heating specialties, heating controls, convector radiation and baseboard heating.

WEBSTER ELECTRIC CO., 1900 Clark St., Racine, Wis.—Booth 2-239

In attendance: B. T. Wiechers, H. B. Hastings, R. Tollner, J. H. Lahey, L. Ehrich, T. Woolf.

Exhibiting: Electric fuel-units and ignition transformers.

WEIL-McLAIN CO., Michigan City, Ind.—Booth 726

In attendance: R. M. Stockwell, P. R. Stockwell, J. E. Sorensen, P. Hitch, J. A. McDonnell.

Exhibiting: "Snug" baseboard; "Raydiant" recessed radiator; "Solray" radiator; gas fired boiler; oil fired boiler; heavy duty boiler. Feature of exhibit will be baseboard room scene with typical boiler hookup; animation of this room scene will show the effect in the room during operation of the boiler and circulating pump.

WEIL PUMP CO., 1530 N. Fremont St., Chicago 22, Ill.—Booths 2-805, 2-807

In attendance: R. T. Sheridan, W. L. Luther, J. D. Spooner, L. V. Woolum, E. A. Ehrlich, F. Feder, J. Palumbo.

Exhibiting: Submersible sewage ejectors, condensate pumps, hot water circulating pump. Working model of new submersible sewage ejector will be featured.

WESTINGHOUSE ELECTRIC CORP., 511 Wood St., P. O. Box 868, Pittsburgh 30, Pa.—Booth 626 (Also see Sturtevant Div.)

WHEELER-ECONOMY HEATING PUMPS, 19th & Lehigh Aves., Philadelphia 32, Pa.—Booth 2-232

In attendance: J. M. Sperry, B. S. Tucker, J. U. Engelbrink, Frank Love, R. H. Thomas, A. W. Kerr.

Exhibiting: Return line vacuum heating pumps; condensate pumps; circulators.

WHITE-RODGERS ELECTRIC CO., 1209 Cass Ave., St. Louis 6, Mo.—Booths 930, 932, 934

In attendance: J. Newman, J. A. Rodgers, Jack Searls, R. H. Ewert, Ed Robinson, R. Weber, D. O. Eggert, E. E. Harwood, A. E. Petersen, R. Sherer, W. Chesboro,

L. P. Williams, C. Garner, C. C. Rennecamp, E. Wechsler, John Jung, W. Bowen, G. Powell, C. Fredericks.

Exhibiting: Complete line of automatic controls for heating and air conditioning.

WILDER MFG. CO.—see HOUSE & CO., T. S.

WILLIAMS GAS-O-MATIC and WILLIAMS OIL-O-MATIC DIVS.—see EUREKA WILLIAMS CORP.

WINDMASTER CORP., 899 Ingleside Ave., Columbus 8, Ohio—Booth 2-337

WING MFG. CO., L. J., Vreeland Mills Rd., Linden, N. J.—Booth 447

In attendance: H. S. Wheller, C. H. Smith, T. Feyrek, G. Nash, D. Burns, C. Diemecke, T. Schenke, Howard Kister, H. J. Clemens, Al Stellingworth, H. Roller, I. Geiger, C. Flarsheim, H. Johnson, Ed Scott, F. L. O'Neill, Thomas Danforth.

Exhibiting: "Draft Inducer"; turbine blower; "EMD" blower; turbine; electric heater; "VT" heater section; revolving heater; transformer cooling fan; fan wheels; straight line duct fan; elbow type duct fan; "Wing Foil" safety fan. New line of electric heaters will be featured, and electric revolving, fixed vertical and horizontal discharge unit heaters will be exhibited for the first time.

WORTHINGTON CORP., Harrison, N. J.—Booth 824

In attendance: W. H. Feldmann, W. O. Wilson, M. M. Lawler, E. R. Michel, W. F. Bishop, D. H. McCuaig, P. H. Shaw, W. J. Millett, J. Charls, Jr., P. A. McLeod, M. E. Ziegenhagen, J. R. O'Neill, E. C. Hamilton, S. R. Hirsch, R. E. Holmes, G. W. Hartwell, H. Wolf, F. B. Steel, W. C. Cheek, E. W. Vinnedge, R. J. Laidlaw, P. A. Mack, J. A. Klaiber, R. B. Scott, A. W. Fraser, E. Rasa, R. O. Gundlach, J. M. Peterson, J. S. Cavanaugh, C. V. Bengle, J. C. Conrad, D. T. Flynn, F. P. Hagee, R. W. Staehle, H. Griese.

Exhibiting: Centrifugal refrigeration system; "Freon" reciprocating compressor; package liquid chiller; package air conditioners; residential air conditioner; room air conditioners for central system; evaporative condenser; room air conditioner—window type. "Freon" reciprocating compressor is representative of new line of compressor units which range from 3 to 150 hp for air conditioning and refrigeration applications; an exclusive feature is an electric unloader which provides capacity control and starting-unloading. Residential air conditioner, available in 3 and 5 hp sizes, is new. New packaged liquid chiller is representative of line of factory-assembled units in range from 3 to 150 hp for air conditioning and industrial process applications. New room air conditioners, both floor and ceiling mounted in 200, 400, and 600 cfm sizes, for use with central systems, can be used with either chilled or hot water or direct expansion systems. New room air conditioner (self-contained window type) available in ¾ and 1 hp sizes.

YARNALL-WARING CO., Chestnut Hill, Philadelphia 18, Pa.—Booths 2-328, 2-330

In attendance: H. J. Moyer, W. J. Agren, C. H. Simmons, Ralph H. Martin.

Exhibiting: Steam traps; strainers; expansion joints; blowoff valves; water columns and gages. New working model of "Yarway" impulse steam trap and new sound film on this trap will be featured.

YATES-AMERICAN MACHINE CO. — see LIPMAN REFRIGERATION DIV.

YORK CORP., Roosevelt Ave., York, Pa.—Booths 2-225, 2-227, 2-231

In attendance: L. P. Quinlivan, Caron Ehehalt, J. Donald Smith, William C. Moore, J. J. Floreth, John Roth.

Exhibiting: Turbo compressor showing cutaway view and all moving parts; unitary air conditioner; residential air conditioners; store air conditioners; room air conditioners. 1953 line of room air conditioners will be featured.

YOUNG RADIATOR CO., 709 S. Marquette St., Racine, Wis.—Booth 206

Exhibiting: Convectors, "Vertiflow" unit heater; cabinet unit heater; gas-fired unit heater; air conditioning unit. A new coil line will be displayed.

YOUNG REGULATOR CO., 5209 Euclid Ave., Cleveland 3, Ohio—Booth 2-301

In attendance: E. O. Young, W. J. Zimmer, Barton D. Wood, Geo. V. Zintel.

Exhibiting: Direct and remote damper controls; relief and multi-blade dampers; volume control registers and dampers; remote controlled registers; corner pulleys.

ZINK CO., JOHN, 4401 S. Peoria St., Tulsa 1, Okla.—Booth 2-207

ZONOLITE CO., "Z" CRETE DIV., 135 S. La Salle St., Chicago 3, Ill.—Booth 2-131

In attendance: D. C. Goff, L. D. Winkler, W. R. Simpson, W. J. Bein, D. J. Boone, M. T. Phillips, Paul Savoie, Art Best, Phil Strand.

Exhibiting: Underground heated pipe insulation conduit.

The following companies are also exhibiting, but their names were received by the publisher too late for alphabetical listing:

ALCO VALVE CO., 865 Kingsland Ave., St. Louis 5, Mo.—Booth 2-917

BERGER FURNACE MFG. CO., 5920 Center Ave., Pittsburgh 6, Pa.—Booth 1128

DOLLINGER CORP., 9 Centre Park, Rochester 3, N. Y.—Booths 2-705, 2-709

HIDDEN HEAT INC., 64 E. Hoffman Ave., Lindenhurst, N. Y.—Booth 2-408

INGERSOLL PRODUCTS DIV., BORG-WARNER CORP., 321 Plymouth Court, Chicago, Ill.—Booth 2-237

LEE CORP., 1011 Tatnall St., Wilmington, Del.—Booth 2-604

MAXWELL, INC., 200 S. Cherokee St., Denver, Colo.—Booth 2-1001

MEYER FURNACE CO., THE, P. O. Box 989, Peoria 1, Ill.—Booth 2-719

PALMER MFG. CORP., 2200 W. Filmore St., Phoenix, Ariz.—Booth 2-904

SENNA MFG. CORP., 118 Browne St., Spokane, Wash.—Booth 2-900

SUPERIOR COMBUSTION INDUSTRIES, INC., 1475 Broadway, New York 36, N. Y.—Booth 2-205

VACUUM GAS BURNER CO., Main at Elmore, Olean, N. Y.—Booth 2-616



YEAR 'ROUND
AIR CONDITIONER

NOW ADDED TO THE COMPLETE LINE OF

Waterbury

FURNACES-AIR CONDITIONERS

WATERBURY FURNACES



R SERIES
YEAR 'ROUND AIR CONDITIONERS

Winter heating and summer cooling are provided through the same ductwork in the Waterbury year 'round air conditioner, newest addition to the Waterbury line. The summer portion of these units is also available for installation with existing heating systems. It is a package unit, including compressor, coil and condenser, as well as filters and controls. The water-cooled compressor is hermetically sealed.

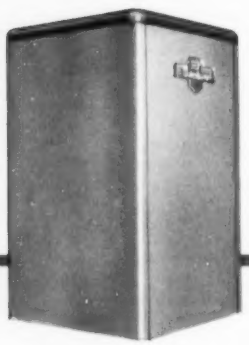
Available in Sizes up to 5 Ton Capacity



6300 & 6400 SERIES
OIL OR GAS-FIRED WINTER AIR CONDITIONERS

Completely automatic oil or gas heat is provided by these Waterbury winter air conditioners. The oil and gas burners are interchangeable with only minor adjustments. Under the streamlined, baked enamel casing are such features as: the famous Waterbury welded-steel furnace body; efficient burner; and heavy-duty, "long-hour" blower motor. Designed and built to give solid comfort for years.

Oil-Fired . . . 7 Sizes; 84,000 to 168,000 Btu Output
Gas-Fired . . . 5 Sizes; 48,000 to 147,000 Btu Output



6300 & 6400 SERIES
OIL OR GAS-FIRED GRAVITY FURNACES

In the gravity line, Waterbury has produced a furnace combining the beauty and durability of the winter air conditioners with the economy of a gravity unit. The same choice of efficient Waterbury burners is offered . . . either the gun-type or vaporizing oil burners, or the Waterbury gas burner. Features necessary in larger systems are eliminated without sacrificing basic Waterbury quality.

Oil-Fired . . . 3 Sizes; 78,000 to 142,000 Btu Output
Gas-Fired . . . 4 Sizes; 60,000 to 97,500 Btu Output



A 100 SERIES
COAL-FIRED WINTER AIR CONDITIONERS

Waterbury's improved coal-fired line offers the greatest economy, both in original cost and in operation. Gravity installations are available for small homes not requiring forced air, and many additional features are housed under the attractive casing of the winter air conditioner. Either type of unit has the Waterbury all welded steel body. Can easily be converted to stoker, oil or gas firing.

Air Conditioner . . . 12 Sizes; 95,400 to 250,000 Btu Output
Gravity . . . 6 Sizes; 85,000 to 225,000 Btu Output

REMEMBER: "IT'S WHAT'S UNDER

AIR CONDITIONERS

B 300 SERIES
OIL-FIRED WINTER AIR CONDITIONERS

The Waterbury B 300 series was developed to meet the demand for a warm air heating plant that will heat large homes and other large buildings. Has exceptional efficiency and capacity. It features a furnace body of unique construction, having an extra large radiator with a baffle designed to provide unusually long fire travel. Maximum heat at the registers . . . minimum loss up the chimney

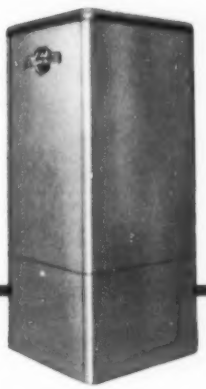
Available in 6 Sizes; 224,000 to 504,000 Btu Output



HI-BOY SERIES
OIL OR GAS-FIRED WINTER AIR CONDITIONERS

With space at a premium in homes without basements, or having small basements, the Hi-Boy fills a real need. It is a complete winter air conditioner in a specially-designed, space-saving casing. The filters and blower are located below the furnace body, rather than beside it. Return air can be taken in at either side or at the bottom, and then heated the same way as in a conventional air conditioner.

Oil-Fired . . . 3 Sizes; 84,000 to 151,000 Btu Output
Gas-Fired . . . 4 Sizes; 48,000 to 120,000 Btu Output



DOWNFLO SERIES
OIL OR GAS-FIRED WINTER AIR CONDITIONERS

Designed especially for small homes using perimeter or floor panel heating, the Downflo series is available in either oil or gas-fired models. Cold air is taken in at the top, heated and forced downward into floor panel openings or perimeter ducts. Finished in gleaming white enamel to match utility room fixtures, the Downflo occupies little space. Saves on installation and operating cost.

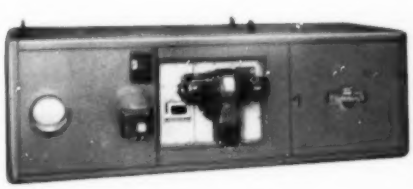
Oil-Fired . . . 2 Sizes; 84,000 to 112,000 Btu Output
Gas-Fired . . . 3 Sizes; 48,000 to 96,000 Btu Output



SUSPENDED FURNACE
OIL-FIRED WINTER AIR CONDITIONERS

This forced warm air furnace is a real space saver, because it requires no floor area. It can be suspended in the attic, in a crawl space under the floor, from the basement ceiling, or in any portion of the building where more space is readily available at ceiling level than on the floor. Assembled at the factory, it has all parts accessible from the front for easy inspection, cleaning and servicing.

Available in 4 Sizes; 84,000 to 168,000 Btu Output



THE CASING THAT COUNTS!"

















Waterbury

the complete line means satisfaction to users, dealers and distributors

USERS know that proper installation of exactly the right unit from a complete, quality line means real comfort in their homes. They know, and tell their friends, that they get all this, and more, with Waterbury.

DEALERS need a complete line to satisfy all their customers. They have it in Waterbury . . . a growing line backed by distributor and manufacturer alike. And they benefit from well-earned consumer acceptance.

DISTRIBUTORS, too, are ahead with a complete line of quality heating equipment. Equally attractive to distributors is the Waterbury policy of territory and distribution rights plus a close factory relationship.















THERE'S A WATERBURY FOR EVERY SIZE HOME AND EVERY TYPE OF FUEL

The Waterman-Waterbury Co.

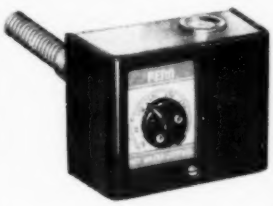
OVER 46 YEARS OF WARM AIR HEATING

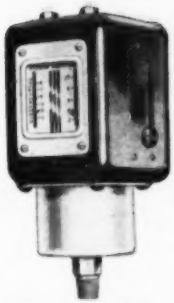
1121 JACKSON STREET N. E. MINNEAPOLIS 13, MINNESOTA



Heat-anticipating, 2-wire thermostat assures closer temperature control for real heating comfort.

Liquid expansion hot water control has "trigger-quick" response, close differential, and many other desirable features.





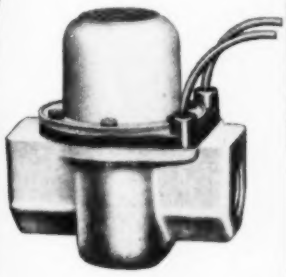
Steam pressure safety limit or operating control has calibrated range and differential scale and convenient outside adjusters.

Flexible element liquid expansion furnace fan and limit control with self-compensating diaphragm feature.



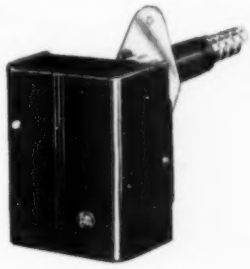
PENN CONTROLS *KEEP* your heating customers SOLD!

Here's a new type of gas valve . . . one that's really quiet. It's an entirely new design idea.





Tem-Clock automatically sets back temperature at night, restores it to comfort level in the morning.



Oil burner stack switches incorporate low voltage protection, 2-wire low voltage hook-up and other features.

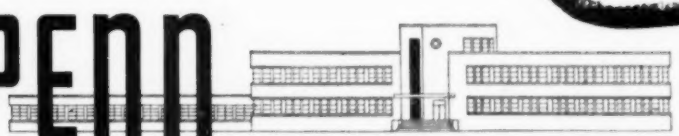
More and more heating dealers are discovering the effective selling job PENN controls do *after* the installation is made. *And that is very important to you!*

Their efficient, dependable performance eliminates HOT-n-COLD LIVING and *really delivers* the better heating comfort you sell. This results in powerful word-of-mouth advertising from better-satisfied customers. Result . . . more sales, more profit for you!

On your next heating job, don't settle for less, use PENN controls and the famous PENN *heat-anticipating* thermostat. They give more satisfaction but cost no more! Remember, the PENN line is complete for *every type of heating system with every kind of fuel.* Ask your burner manufacturer, wholesaler or write **Penn Controls, Inc., Goshen, Indiana.** Export Division: 13 E. 40th Street, New York 16, N.Y., U.S.A. In Canada: Penn Controls Limited, Toronto, Ontario.

Nationally advertised in
BETTER HOMES & GARDENS
AMERICAN HOME
NEWSWEEK

PENN



AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, GAS APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

Look to MOR-SUN..

The Mor-Sun line of Forced Warm Air Conditioners has been built to meet today's demand for high quality, dependable heating equipment that represents top dollar for dollar value. Every resource at our command has been dedicated to the design and production of the best heating equipment that money can buy. The Mor-Sun line for 1953 has been built to fit the Profit Market for Mor-Sun Dealers.

Look to MOR-SUN for More Quality

- Completely new, deep drawn, more efficient Mor-Sun Heat Exchanger.
- New, quieter, more economical Oil Burner with body of deep drawn, heavy gauge steel. Precision manufactured.
- New Gas Burner with simplified manifold and service features.
- New Mor-Sun Thermostat with Comfort Zone Range.
- No metal-to-metal contact on flue or divider plates.
- Larger Filter Areas.
- New, slower speed blowers.
- New aluminum foil faced fiber glass liners.
- Lower stack temperatures.
- New packaging—saves money—easier to handle.
- Mor-Sun Furnaces are approved by the American Gas Association—listed by the Underwriters' Laboratories and the Canadian Standards Association.



MOR-SUN DELUXE WARM AIR CONDITIONERS

The smart, modern design of these DeLuxe Warm Air Conditioners is combined with rugged efficiency to deliver dependable, economical Winter Comfort. BTU output range from 84,000 to 152,000 in four models, interchangeable for Gas or Oil. New Mor-Sun Heat Exchanger has greater radiation surfaces, delivers more heat. Entire Warm Air Conditioner guaranteed for one year.

Look to MOR-SUN for More Profits! — Look to MOR-SUN for More Advertising!



The Mor-Sun Controlled Inventory Plan enables you to reduce your inventory investment to a minimum and yet satisfy the needs of your customers. The interchangeability feature of Mor-Sun Furnaces lets ten furnaces do the job of an inventory of twenty-five. Furnace and burner units are packaged separately enabling you to make the furnace installation at the right stage in new construction. All Mor-Sun Furnaces, except the RF-21 which is made only for gas, are designed and engineered to work with equal efficiency and economy with Gas or Oil.



Mor-Sun Furnaces will be backed by the biggest advertising campaign in our history. Consumer acceptance for these Quality furnaces will be increased by consistent advertising in *Better Homes & Gardens, American Home* and *House Beautiful* as well as in *Small Homes Guide, House & Garden Book of Building* and *House Beautiful Maintenance & Building Manual.* To help you sell the Building Contractors a large space campaign on Mor-Sun Furnaces will appear in *American Builder, House & Home* and *Practical Builder.* All of this activity will be supported by sales promotion literature and point-of-sale promotion material for Mor-Sun dealers and distributors.

SEE OUR DISPLAY
INTERNATIONAL HEATING AND VENTILATING SHOW
Booth 205

MORR

● *Manufacturers of* **MOR-SUN FURNACES • ROLY-DOOR STEEL GARAGE DOORS • CARRY-ALL TRUCK BODIES**

601 Amherst Street, Buffalo 7, New York

..for More Furnace Profits!





MOR-SUN GENERAL PURPOSE FORCED WARM AIR FURNACES
Three dependable models for smaller homes. Can be installed in basement, utility room or closet area. BTU output range from 52,000 to 95,200. The new Mor-Sun Heat Exchanger gives more heat at less cost. Interchangeable for Gas or Oil operation. Complete units guaranteed for one year. Maximum floor space 24" x 25".

MOR-SUN REVERSE FLOW FORCED WARM AIR FURNACES
Three quality furnaces for perimeter or spider heating layouts. Ideal for homes without basements. BTU output range from 52,000 to 95,200. Use Gas or Oil fuel. New Heat Exchanger gives more heat with less fuel consumption. Complete units guaranteed for one year. Maximum floor space 24" x 18½".

...Look to MOR-SUN for More Opportunity!

Distributors and Dealers who want to keep *costs down* and *profits high* will find their opportunity with the New Mor-Sun Furnace line. If you are interested in selling quality merchandise that is properly promoted we suggest you look to Mor-Sun today.

Let Morrison help you get your goods to market. Morrison Carry-All Truck Bodies for ½ to 1 Ton truck chassis are the answer to your need for a precision made steel truck body for pick-up or express chassis. Side boxes keep tools and equipment under lock and key in weather-tight compartments. Cost is low—efficiency high. Write for complete information. Carry-All Division, Morrison Steel Products, Inc., Buffalo 7, N. Y.

FOR MORE PROFITS with MOR-SUN
fill out and mail this coupon

Mor-Sun Furnace Division
MORRISON STEEL PRODUCTS, INC.
Buffalo 7, New York

Gentlemen:
Please send me complete information on Mor-Sun Furnaces and the Mor-Sun Plan for Profits.

Firm Name _____

Address _____

City _____ *Zone* _____ *State* _____

We are ☐ Distributors ☐ Dealers ☐ Sheet Metal Contractors
PLEASE CHECK AA

MOR-SUN FURNACE DIVISION

MOR-SUN

MORRISON STEEL PRODUCTS, INC.

FOR MORE MORE PROFITS YOU NEED



SELL SNO-BREZE



PUT MISS SNO-BREZE TO WORK FOR YOU

PROFIT

WITH AMERICA'S MAIL

SALES IN '53 PALMER!

OR PALMAIRE COOLERS

LET THE **PALMAIRE** HOTTENTOT GO TO WORK FOR YOU



- THE MOST COMPLETE LINE OF COOLERS
- BACKED BY THE MOST COMPLETE PROMOTION
- BETTER DESIGN TROUBLE-FREE OPERATION
- A FIRM MERCHANDISING POLICY TO INCREASE SALES—ASSURE PROFITS

OPPORTUNITY FOR YOU!

BEST KNOWN COOLERS

THE COUPON *TODAY*

Palmer Manufacturing Corporation
Phoenix, Arizona
SUBSIDIARY OF McCRAY REFRIGERATOR COMPANY, INC.

Palmer Manufacturing Corporation
2200 W. Filmore St.
Phoenix, Arizona

Please send me information on Palmer Coolers. I am interested in
☐ A Distributorship ☐ A Dealership

Name.....

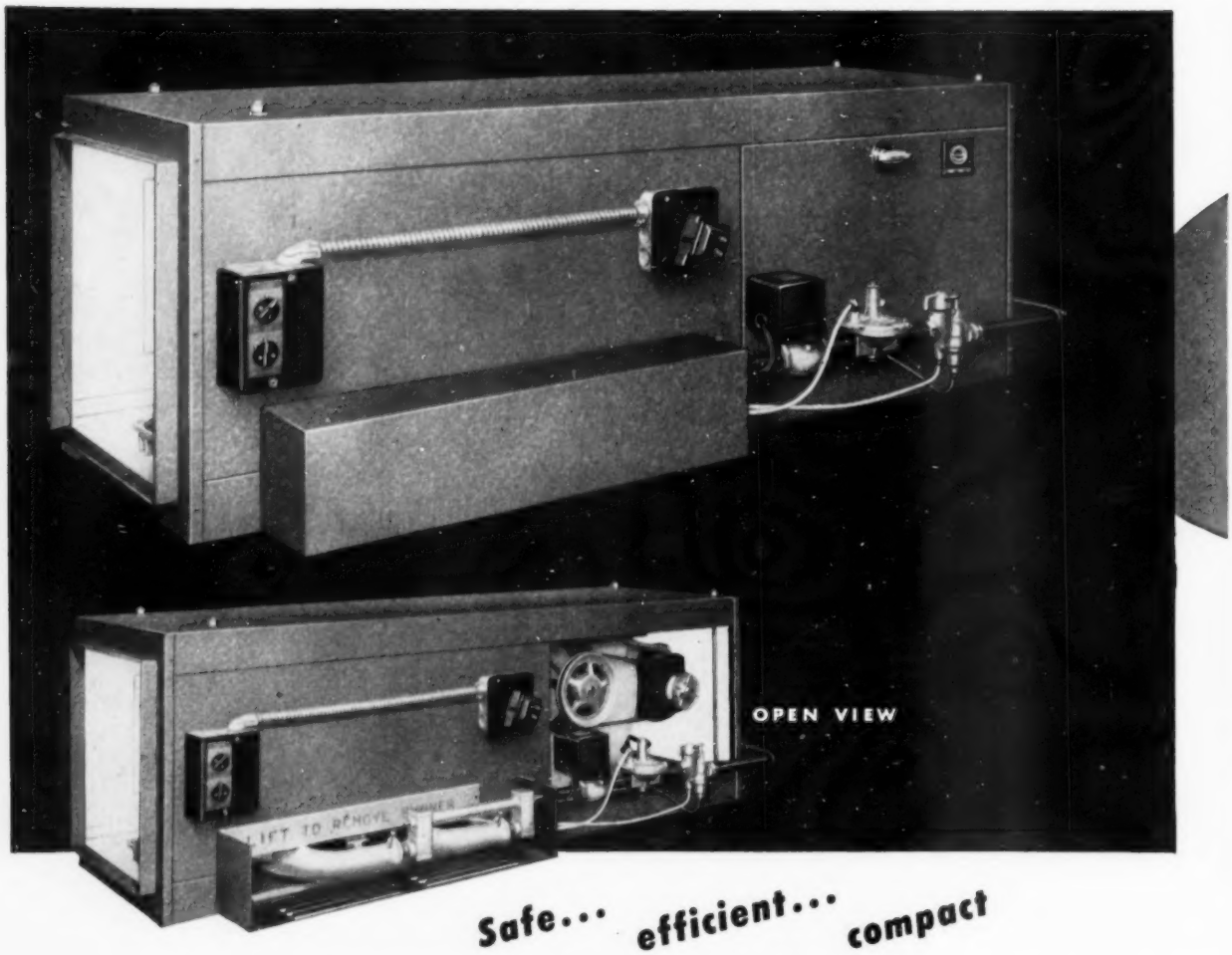
Company.....

Address.....

City.....Zone.....State.....

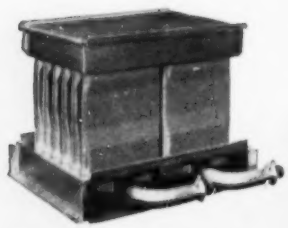
AA-1

It's new! It's needed! an efficient

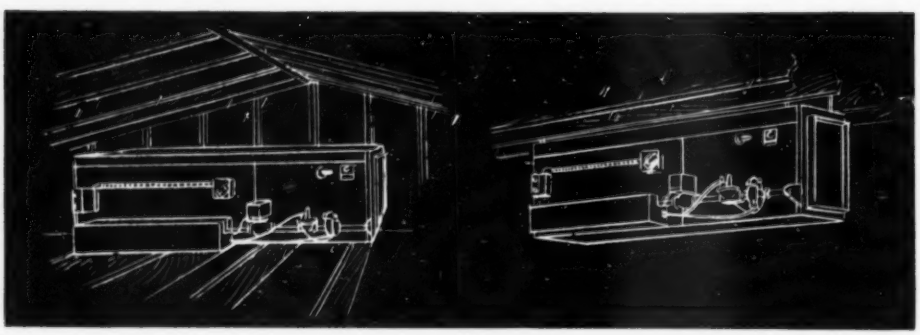


Safe... efficient... compact

for perimeter installations, conventional duct systems or as a unit heater



THE HEART of the Pawnee is its heavy steel heating element and efficient slotted port type burner shown above. Especially designed to provide correct amount of heating surface without hot or cold spots. Burner has rugged cast iron body for long life. Dependable and quiet in operation.



gas fired horizontal unit for

limited space, out-of-the-way installations

PAWNEE
Winter Air Conditioner
by AMERICAN-Standard

DESIGNED especially for low cost installations in homes where limited floor space makes it difficult or undesirable to set up conventional winter air conditioners, this new gas fired horizontal unit has tremendous sales appeal.

The Pawnee's compact size and safe construction permits installation in attics, under floors, or suspended from the ceiling of basements, closets, utility rooms, or similar out-of-the-way locations. It is also perfect for zone heating in larger single floor homes where more than one winter air conditioner can be employed.

Completely factory assembled and wired, the Pawnee is easy to handle and can be installed quickly and economically in both new construction and modernization jobs. It operates efficiently with natural, manufactured, mixed, and liquefied petroleum gas. Made in four sizes: 40,000, 60,000, 80,000 and 100,000 Btu input per hour. For details, contact your wholesale distributor. **American Radiator & Standard Sanitary Corporation,** P. O. Box 1226, Pittsburgh 30, Pennsylvania.

Ready NOW . . . immediate delivery!

● Pawnee is available for immediate delivery. Arrange to stock and display this new gas fired horizontal winter air conditioner in your community during the busy building and modernization season just ahead.

AMERICAN-Standard
HEATING

Serving home and industry

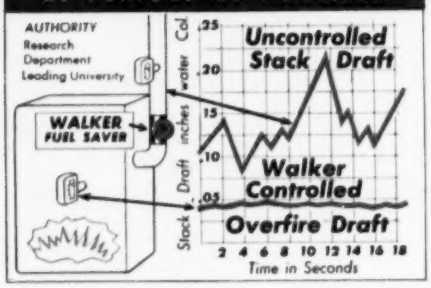
AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS & WALL TILE • DETROIT CONTROLS • KEWANEE BOILERS • ROSS HEATER

WALKER FUEL-SAVER AUTOMATIC DRAFT REGULATOR

First Name IN AUTOMATIC DRAFT REGULATION

SAVE up to 25% on Fuel with Walker

Here's DRAFT CONTROL PERFORMANCE as PERFECT as POSSIBLE



A heating system—no matter how modern its design—fails to attain maximum efficiency and economy unless it's properly equipped with effective automatic draft control.

You profit when you help your customers save on fuel and obtain top heating efficiency. And you're bound to profit most when you provide for automatic draft regulation—"as perfect as possible"—with Walker.

It is as simple as it is profitable to equip your heating systems with Walker Fuel-Saver Automatic Draft Controls. There's a Walker made for every conventional heating purpose.

You can rest assured that any Walker Fuel-Saver is designed and manufactured to give a long life of trouble-free service. 10,000,000 have been sold.

For full information and complete 20-page catalog on the Walker line, write to . . .

WALKER MANUFACTURING & SALES CORPORATION
1709 PENN STREET
ST. JOSEPH, MISSOURI



TYPE 34Z . . . for space-heaters . . . water heaters . . . cabinet-type heaters.

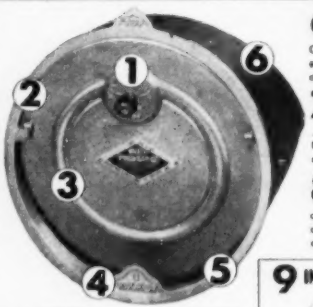


TYPE 34C . . . for furnaces . . . boilers . . . winter air-conditioners—stoker and oil fired.



TYPE 34B . . . for circulators . . . water heaters . . . trailers stoves . . . magazine stoves.

CHECK THESE 9 POINTS OF SUPERIORITY



1 EASE OF ADJUSTMENT Turn of pointer on calibrated dial instantly selects correct draft. Calibrations correspond to specific draft values.

2 BOX TYPE PIVOT HINGES Positive sealed bearing surfaces, friction-free nickel-plated hinge pins, protect against corrosion, dirt, dust. This most expensive construction gives long life.

3 BALANCE PLATE . . . scientifically designed with accurate brass fittings to maintain correct balance between atmospheric and pressure inside smoke pipe.

4 SPECIFIC PIPE SIZES Insures correct capacity for every type of installation.

5 ALUMINUM FRAME Aluminum casting is rigid, light, long lasting.

6 EASE OF INSTALLATION Collar or stub furnished to provide quick attachment to pipe.

7 ARMCO ALUMINIZED STEEL . . . finest available for heat and corrosion resistance.

8 FACTORY-SET accurate balance assures performance as perfect as possible.

9 INSIDE VIEW



Shows unrestricted area for free flow of air . . . effecting more complete regulation.

NO OTHER DRAFT REGULATOR HAS ALL THESE FEATURES

New WALKER Venturi-Top Chimney Cap

Designed to the basic Venturi engineering principle. Streamlined vane and hood is mounted on a patented friction-free pivot. Always maintains position away from wind to prevent chimney down drafts. Specify this quality device in the 9 out of 10 service calls traceable to insufficient draft. Effective also for ventilating purposes. Pipe size: 8". Larger sizes available soon.



See Booth 2-233 At 11th Internat'l Heating & Ventilating Exposition





"CHRYSLER BUILDING EAST"
Architect:
Reinhard, Hofmeister & Walquist.
General Contractor:
Turner Construction Co.
Sheet Metal Contractor:
Benjamin Riesner, Inc.



FOR MAXIMUM PROTECTION

at the Chrysler Building East

COPPER BASE FLASHING *is installed with the new Chase Copper Base Flashing Expansion Joint*

Notice this long run of copper base flashing at the 11th floor step-back of Chrysler Building East. Whether the New York mercury dips or soars, expansion and contraction of the metal are safely and efficiently allowed by the proper spacing of the Chase Expansion Joints.

The efficiency and economy of copper for base flashing is assured with this new Expansion Joint. Architects as well as Sheet Metal Contractors are aware of the solid lasting protection, which this development now makes possible.

The new Chase Copper Base Flashing Expansion Joint, made of 18-ounce copper has open seams on the edges of the joint for fast, easy interlocking and soldering to the adjoining lengths of base flashing. A "cap box" is supplied with each Expansion Joint for attachment to the cap flashing and a completely watertight job.



FREE FOLDERS: *You will also want to know about the new Chase One-piece Thru-Wall Copper Flashing and Cap Flashing Receiver. Write for folders on both these new developments in copper flashing.*

Chase
BRASS & COPPER

WATERBURY 20, CONNECTICUT - SUBSIDIARY OF KENNECOTT COPPER CORPORATION

• *The Nation's Headquarters for Brass & Copper*

Albany†	Chicago	Denver†	Kansas City, Mo.	Newark	Pittsburgh	San Francisco
Atlanta	Cincinnati	Detroit	Los Angeles	New Orleans	Providence	Seattle
Baltimore	Cleveland	Houston†	Milwaukee	New York	Rochester†	Waterbury
Boston	Dallas	Indianapolis	Minneapolis	Philadelphia	St. Louis	(†sales office only)

Chase Brass & Copper Co., Waterbury 20, Conn. AA153

Please send me your free folders

☐ *Chase Copper Base Flashing Expansion Joint.*
☐ *The New Chase One-Piece Thru-Wall Copper Flashing.*

NAME _____

POSITION _____

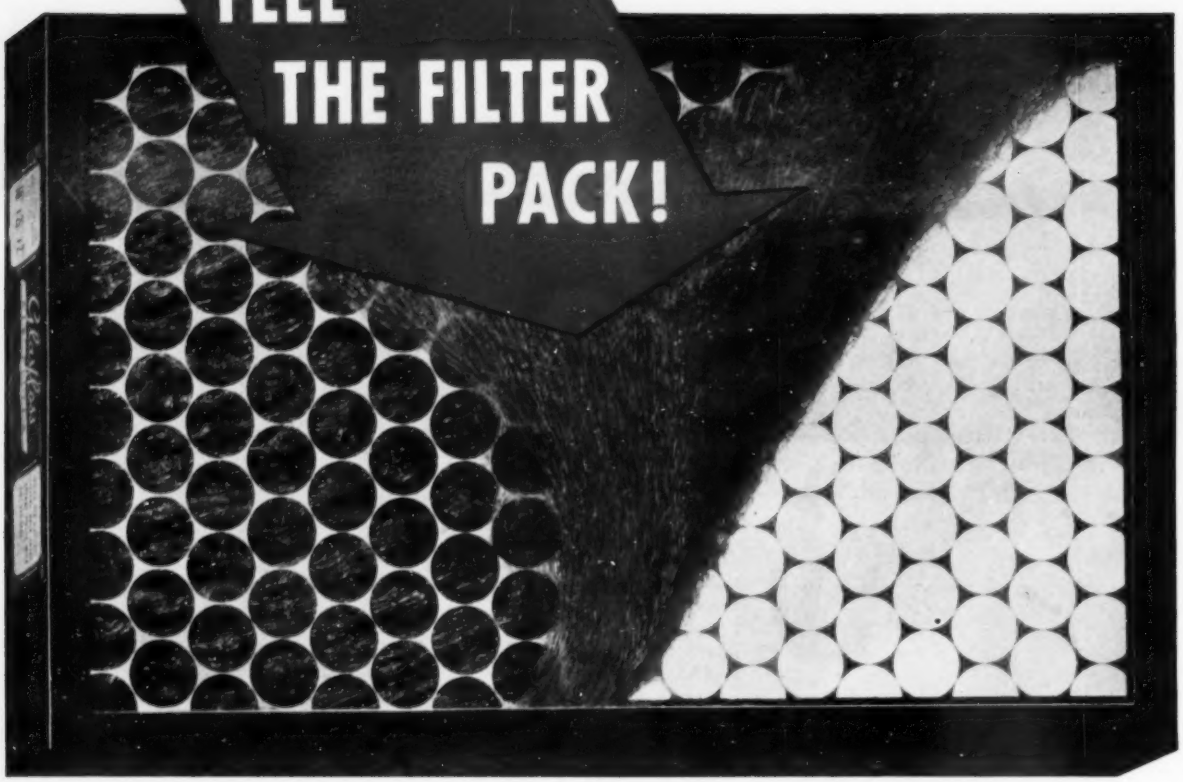
FIRM _____

STREET _____

CITY _____ STATE _____

When you Compare Air Filters . . .

FEEL THE FILTER PACK!



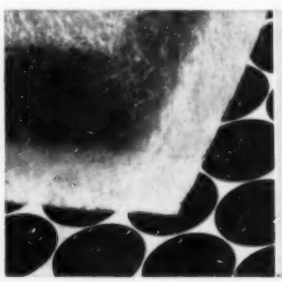
The soft, silky glass fibres are easy on the hands—and really stop Dust! The *magnified* view of the Glasfloss filter pack above shows why the long, fine curly fibres provide efficient filtering action. This fluffy, resilient mass provides an intricate maze of air passages with a greater surface area to catch and hold more dust throughout the entire pack. RESULT: Longer life, less changes, lower cost.

Glasfloss DISPOSABLE AIR FILTERS

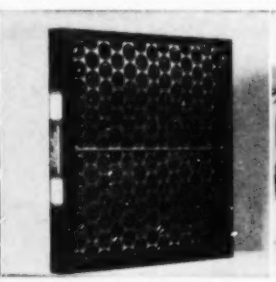
- Hold more dust at higher efficiency
- Less resistance to the passage of air
- Insure greater air capacities
- Easier to handle during installation and removal
- Tough and resilient
- Highly fire resistant
- Moisture-proof

Glasfloss
MAKES A COMPLETE LINE OF DISPOSABLE AIR FILTERS

Descriptive literature on request—
Address Dept. AA-1



GLASFLOSS I-S
for heavy industrial use



GLASFLOSS STANDARD
the all-purpose filter



GLASFLOSS ROLL-PAK
for economical bulk use

Glasfloss 155 EAST 44th STREET, NEW YORK 17, N. Y.



SPECIAL ADVANCE SHOWING of NEW FRIGIDAIRE RESIDENTIAL AIR CONDITIONERS

—one of the biggest profit opportunities in the industry

YEAR 'ROUND AIR CONDITIONING UNITS that combine both heating and cooling.

ADD-ON AIR CONDITIONING UNITS that can be used with forced warm air furnaces for easy installation in large or small homes.

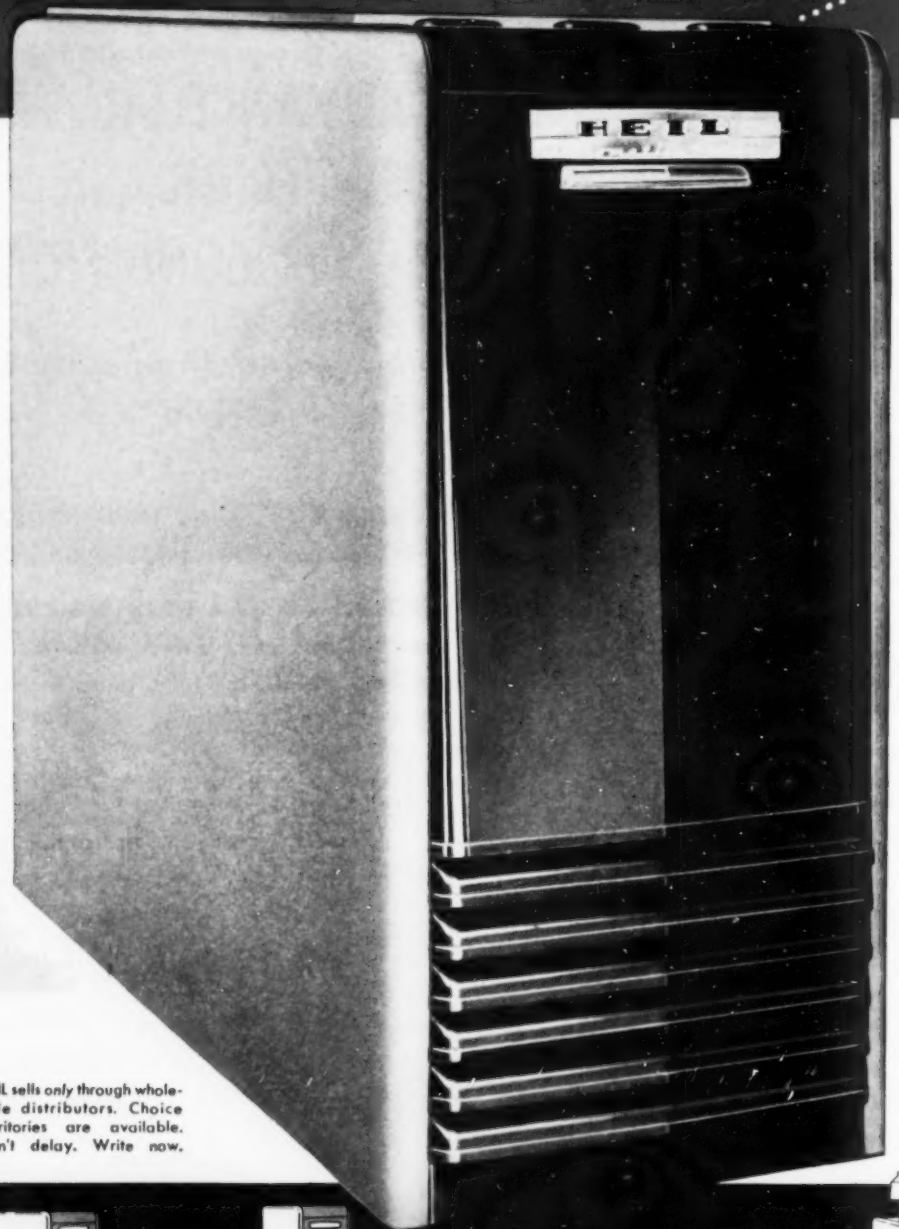
Also see

Frigidaire Self-Contained Air Conditioners
Window Type Room Air Conditioners
Compressors • Cooling Coils

You are cordially invited to visit our exhibit. Examine the wide array of new Frigidaire products to your heart's content. And feel free to discuss any of your problems with the well-informed Frigidaire representatives who will be there to talk to you.

FRIGIDAIRE

"HEIL



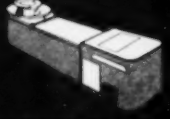
HEIL sells *only* through wholesale distributors. Choice territories are available. Don't delay. Write now.



GAS-FIRED WINTER AIR CONDITIONERS



GAS-FIRED HIGHBOYS



CONVERSION GAS BURNERS



GAS-FIRED BOILERS

can help you lead in Modernization "

Say Dealers Across the Country

EXCLUSIVE DESIGN

Modernizing home owners are interested in details. You've really got something to talk about, say dealers, when you show them HEIL's exclusive design, combustion engineered to get more heat from the fuel.





HIGHER EFFICIENCY

Home owners are looking for better heating, but they want to save money, too, the dealers report. HEIL units are more efficient, by independent laboratory tests —you can guarantee fuel savings!

BETTER LOOKING



When a home owner modernizes, his plans often include a recreation room—and he always wants his home to look better. Dealers find that best-looking HEIL units are much easier to sell.

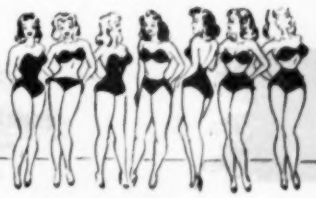


FAR MORE RUGGED

You can't fool a dealer on quality. HEIL uses heavier gauge metals, better alloys. HEIL construction is more careful, more closely inspected. Insulation is better. Check HEIL's weight against any other and see!

FULL RANGE OF MODELS

You get no place fast, according to the dealers, if you try to sell a unit that "almost fits." HEIL gives you a full range of unit sizes and types for both oil and gas, and for steam, water, or warm air—and HEIL was first in oil-to-gas convertibility.



THE HEIL CO.

3000 W. Montana St., Milwaukee 1, Wis. • Rt. 29, Hillside 5, New Jersey

SALES OFFICES: Hillside, N. J.; Atlanta, Ga.; Washington, D. C.; Cleveland, Ohio.; Chicago, Ill.; Detroit, Mich.; Milwaukee, Wis.; Kansas City, Mo.; Denver, Colo.; Dallas, Tex.; Los Angeles, Calif.; Seattle, Wash.



OIL-FIRED BOILERS



CONVERSION OIL BURNERS



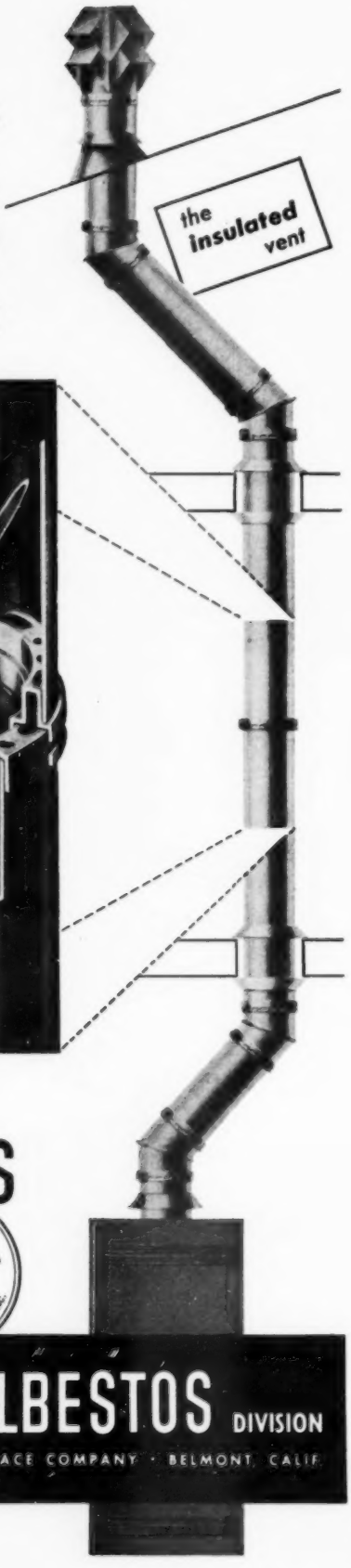
OIL-FIRED HIGHBOYS



OIL-FIRED WINTER AIR CONDITIONERS



These are the reasons why METALBESTOS is the **best** gas vent



1 **FAST, EASY INSTALLATION**

Sturdy, die-formed couplers slip together readily without forcing. No cement, mastic or banding material needed. Adjustable lengths and elbows eliminate costly cutting and fitting; speed installation.

2 **SAFE, EFFICIENT VENTING**

Double-wall Metalbestos gives a "hot stack" quickly and continuously for complete removal of fumes — yet air-insulated outer pipe remains cool even after prolonged operation. Precision-made couplers seal both inner and outer pipes ... cannot pull apart to cause dangerous leaks.

3 **DURABLE AND DEPENDABLE**

All-aluminum, sturdy construction eliminates costly replacements due to damage during shipping, handling or installation. Metalbestos will not crack or shatter, and is highly resistant to corrosion — forms a rigid, dependable venting system.



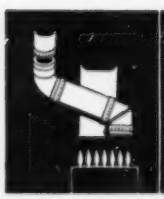
for the **best** job use METALBESTOS



***Write today for Free* VENTING MANUAL**

This useful manual, "Venting of Gas Appliances," contains important rules and helpful tips on approved venting practices. No cost or obligation.

Write today to Dept. B.



METALBESTOS DIVISION

WILLIAM WALLACE COMPANY · BELMONT, CALIF.

HUSSEY

MAJESTIC

3-Way Thru Wall
COPPER FLASHING



BETTER!

3 ways

- ✓ INSTALLS EASILY
- ✓ BONDS TIGHT 3 WAYS
- ✓ STOPS MASONRY DETERIORATION

You will like installing Majestic 3-Way Thru Wall Flashing because its soft 16 gauge copper is easily cut and formed right on the job. Its design is loadbearing so there's less chance of crushing under heavy coping blocks and you will know that it is permanently bonded into the mortar because it bonds 3 ways . . . vertically, horizontally and laterally. When you are called upon for thru wall flashing, get the one that goes in easily . . . that is especially designed for its job and that assures the lifetime durability of copper. Make it Majestic 3-Way Thru Wall Copper Flashing.

USE ALL OF THESE HUSSEY BUILDING PRODUCTS

Copper Sheet Metal
Copper Flashing
Majestic 3-Way Thru Wall Flashing
Copper Ridge Roll
Copper Eave Troughs
Copper Conductor Pipe
Roof Drainage Accessories
Copper Tubing
Copper and Brass Pipe
Copper Nails

C. G. HUSSEY & COMPANY
(Division of Copper Range Co.)
ROLLING MILLS AND GENERAL OFFICES
PITTSBURGH 19, PA.

HUSSEY

SEVEN CONVENIENT WAREHOUSES TO SERVE YOU

PITTSBURGH • CLEVELAND • NEW YORK • CHICAGO • ST. LOUIS • PHILADELPHIA • CINCINNATI

The U. S. Steel Supply team that gives you

personalized service

He specializes in solving your technical troubles!



OUR product specialist is qualified to give you expert advice on the selection of steel for a particular purpose, and on the choice of tools, equipment and machinery that can frequently speed up your production. He can interpret and develop specifications to fit your needs, and he can advise on the methods of handling the various kinds of steel and steel products during your production operations. Often he can save you time or money, or help you meet a delivery date by suggesting alternate materials for your product. And at his finger tips is the latest information about government restrictions, expected availabilities of special grades of steel, and similar subjects.

You can put a product specialist's talent to work on your problem through your U. S. Steel Supply salesman. Your salesman is the "quarterback" of the U. S. Steel Supply team of experts. When he knows your needs, he will put the right man or combination of men to work to satisfy them quickly.

YOUR "ONE CALL" SOURCE OF STEEL SERVICE

U.S. STEEL SUPPLY

UNITED STATES STEEL SUPPLY DIVISION, UNITED STATES STEEL CORPORATION
HEADQUARTERS: 208 So. LA SALLE ST., CHICAGO 4, ILL. WAREHOUSES AND SALES OFFICES:

BALTIMORE • BOSTON • CHICAGO • CLEVELAND • HOUSTON • LOS ANGELES • MILWAUKEE • MOLINE, ILL.
NEWARK • PITTSBURGH • PORTLAND, ORE. • ST. LOUIS • TWIN CITY (ST. PAUL) • SAN FRANCISCO • SEATTLE
Sales Offices: INDIANAPOLIS • KANSAS CITY, MO. • PHILADELPHIA • PHOENIX • ROCKFORD, ILL. • SALT LAKE CITY • SOUTH BEND • TOLEDO
TULSA • YOUNGSTOWN

UNITED STATES STEEL



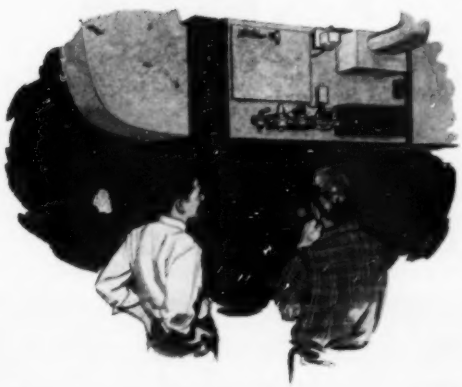
Thatcher

OFFERS YOU A COMPLETE WARM AIR HEATING LINE FOR BOTH THE REPLACEMENT AND NEW CONSTRUCTION MARKETS *PLUS...*

A CONSUMER ACCEPTANCE BASED ON A 103 YEAR REPUTATION FOR QUALITY.



...AND HERE'S THE NEWEST—



THE *522*

HORIZONTAL

GAS-FIRED

WINTER AIR CONDITIONER

55,000 B.T.U. at Register • A.G.A. approved for all city gases and L. P. gas • Completely factory assembled • Unusually compact (only 13¾" x 25⅛" x 49") • Can be suspended from ceiling joists or installed in crawl space or attic.

THATCHER FURNACE COMPANY

GARWOOD, NEW JERSEY

WINTER AIR CONDITIONERS • FURNACES • GAS BURNERS • OIL BURNERS • BOILERS

the Convector Humidifier...
NO TRICK TO INSTALL IT QUICK!

Time is money . . . and that's what the Maid-O'-Mist Convector Humidifier saves you by cutting installation time in half. All you do is cut the proper size opening in the plenum and attach the plenum flange frame. Then just slip in the factory assembled unit, make the necessary water connections and you're through. No fitting or fastening to the back of the plenum. The unit is entirely supported by the flange frame in front. That's how quick and easy it is to install the world's most efficient warm air furnace humidifier.



Patented Evaporator Pads are constructed of corrugated long grain paper fillers with outer layers of asbestos. The corrugations form capillary tubes which greatly increase the water absorbing qualities of the pads.

View at left, shows the back plate extended to illustrate the individual trough construction. Entire humidifier is made of non-corrosive metals—copper and brass. 6 feet of ¼" O.D. copper tubing with saddle valve for water connections is also furnished.

Note above how Maid-O'-Mist's exclusive individual trough design allows the air to flow freely up between the evaporator pads. The entire area of each of the large evaporator pads is in direct contact with the warm air flow thus providing 30% more evaporating surface.

This view shows why installation time can be reduced by 50%. You just cut opening in plenum and make water connections. 13 sizes available with evaporation capacities of 1 to 10 gals. of water per day. Get full information on these competitively priced units from your jobber or write for Bulletin 701-B.

60%
less air restriction in plenum

30%
more evaporation area

50%
less installation time

MAID-O-MIST Inc.
HEATING SPECIALTIES

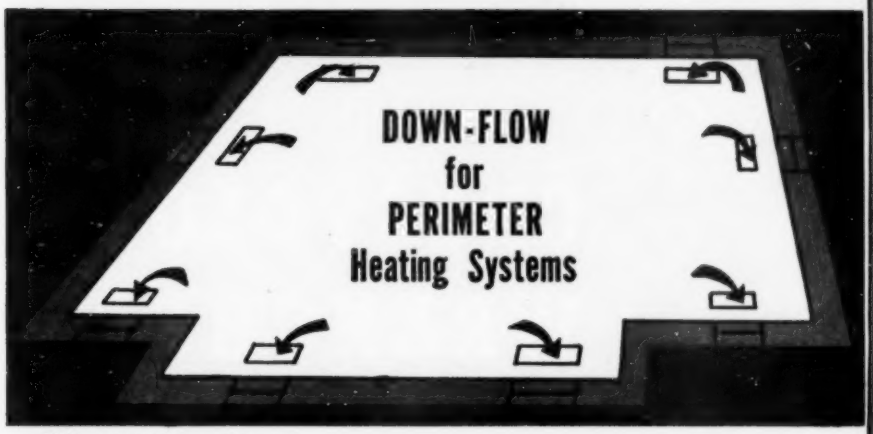
AUTOMATIC HUMIDIFIERS . . . . . AUTO-VENTS
WATER LINE CONTROLS . HEATING SPECIALTIES

MAID-O'-MIST, Inc.

3217 NORTH PULASKI ROAD . CHICAGO 41, ILL.

WINTER AIR CONDITIONING at its BEST!

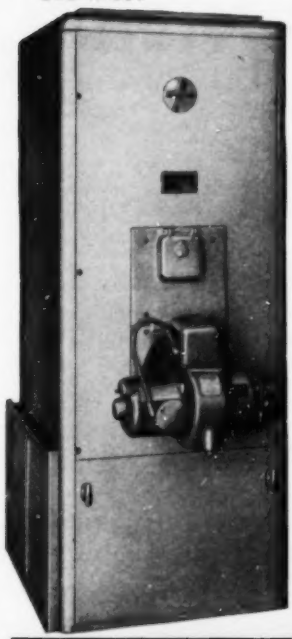
Activated Heat WITH warm air NIAGARA FURNACES





GAS Model 40-BG DFAC DOWN-FLOW

OIL Model 30-90 DVAC HI-BOY



. . . and conventional "up-flow" Hi-Boys . . .

Long noted for dependable and efficient service—supplying maximum heat at minimum cost—Niagara furnaces are fast gaining fame also as maximum profit-makers for heating contractors.

The Niagara line, greatly enlarged to meet all modern residential heating requirements, now includes:

GAS } Basement and utility-room models . . . Down-Flow and conventional "up-flow" Hi-Boy units (steel) . . . also the famous Deluxe "Thrifty 50" with the exclusive, efficient Niagara cast-iron heat exchanger—forced air and gravity.

OIL } Down-Flow and conventional "up-flow" Hi-Boy models and basement-type forced-air and gravity units (steel).

COAL } Complete winter air conditioners and round and square gravity furnaces (cast-iron).

SIZES FOR LARGE, MEDIUM AND SMALL HOMES

For detailed information on the profit opportunity with Niagara, write:

NIAGARA FURNACE DIVISION
The Forest City Foundries Company
2500 West 27th St., Cleveland 13, Ohio

NIAGARA is the word for MAXIMUM HEAT at MINIMUM COST



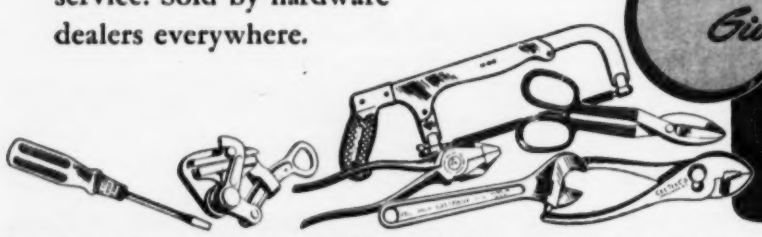
NO FINER WRENCH ANYWHERE!

CRESTOLOY Wrenches are forged from a special alloy steel permitting thinner, trimmer design with greater strength and less weight than conventional adjustable wrenches. Their chrome plate finish is as durable as it is handsome. Choose CRESTOLOY Wrenches for outstanding performance in the toughest kind of service. Sold by hardware dealers everywhere.

8 SIZES IN SINGLE & DOUBLE END TYPES

Number	Size	Capacity
AC14	4"	1/2"
AC16	6"	3/4"
AC18	8"	15/16"
AC110	10"	1-1/8"
AC112	12"	1-5/16"
AC115	15"	1-11/16"
AC118	18"	2-1/16"
AC124	24"	2-7/16"
BC146	same as 4" and 6" above	
BC168	" 6" " 8" "	
BC1810	" 8" " 10" "	
BC11012	" 10" " 12" "	

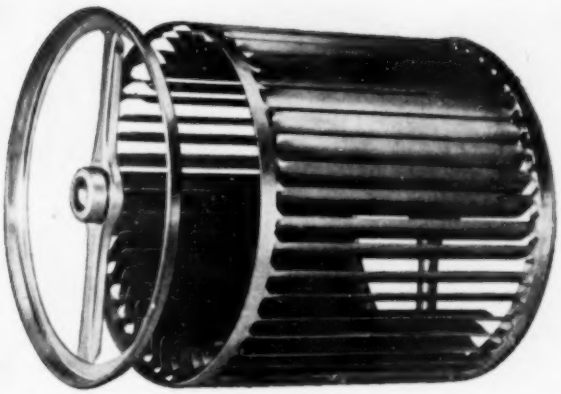
CRESCENT TOOLS
Give Wings to Work
®
Sign of the Artisan
Symbol of Excellence



Crescent is our trade-mark, registered in the United States and abroad, for wrenches and other tools. Sold by leading distributors and retailers everywhere and made only by

CRESCENT TOOL COMPANY, JAMESTOWN, NEW YORK

THE *Mayne* (patented) **Blower Wheel**



Custom-Built QUALITY...Production-Line COST

Now! A blower wheel that is outstanding for its simplicity of design and construction . . . that offers greater strength and rigidity . . . that provides more efficient performance and longer service life . . . offered at reasonable cost.

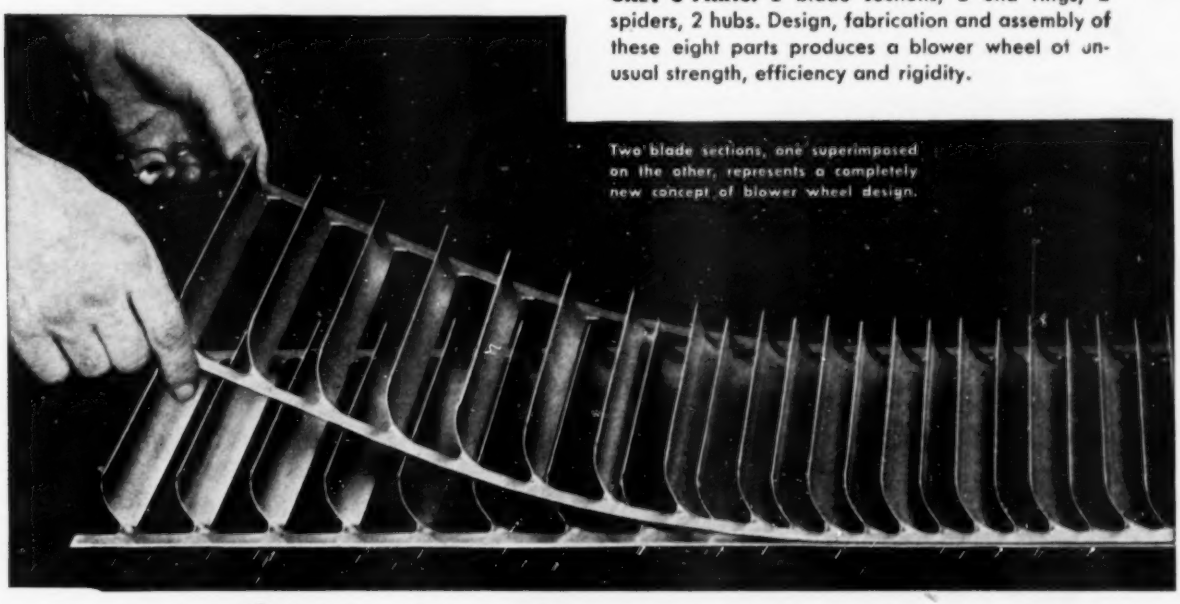
As a component part, the Mayne Blower Wheel can contribute important advantages that will help make yours a better product. Write today for complete information and specifications; available in seven standard sizes.

STRENGTH—The use of two blade sections results in closer spacing of blades, greatly increases strength of blade section. Spiders at both ends of wheel provide maximum support, distribute wheel weight evenly on bearings.

PERFORMANCE—Exclusive method of attaching blade sections to rings allows greater exposure of blades to air, increases air output, reduces noise and turbulence.

RIGIDITY—Accurately rolled channel rings at both ends of wheel are solidly welded to double blade sections, assure maximum wheel strength and rigidity.

ONLY 8 PARTS: 2 blade sections, 2 end rings, 2 spiders, 2 hubs. Design, fabrication and assembly of these eight parts produces a blower wheel of unusual strength, efficiency and rigidity.



Two blade sections, one superimposed on the other, represents a completely new concept of blower wheel design.

Mayne **PRODUCTS CO.**

324 HARRIES BUILDING, DAYTON 2, OHIO



It pays to "Meet the Family" of the First sheet metal screw

THE ORIGINAL PARKER-KALON TYPE A →

For fastenings to light gage (.015″ to .050″) sheet metal. Also made in Stainless Steel (18-8). The favorite of fastening-wise sheet metal men for over 30 years.



P-K TYPE Z* For fastenings to light and heavy gage sheet metals (.015″ to .200″). Also made in Stainless Steel (18-8). The right combination of hardness and toughness in every screw. * A. S. A. — TYPE B



P-K HEX HEAD TYPE Z* For fastenings to light and heavy gage sheet metals (.015″ to .200″) and structural steel (.200″ to ½″). Has many applications in fabricated steel buildings. * A. S. A. — TYPE B



HARDENED P-K SCREWNAIL For fastening sheet metal to wood. Screw strength and nail speed in one fastening. Hardened, it pierces metal that would bend ordinary nails—has 4 times the holding power.

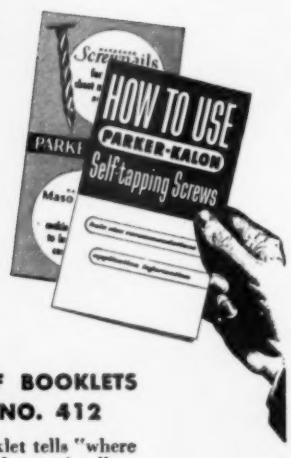


HARDENED P-K MASONRY NAILS For fastenings to brick, mortar, concrete, etc. Drive them with a hammer in a drilled hole of proper size—drive without holes in softer masonry. Quicker than lead anchors and expansion bolts. Hold securely, cost less.

There are still *more* P-K Fastening Devices that are just right for certain jobs. Be sure you know them all—start making savings you've missed.

DELIVERIES ARE BETTER . . . SPECIFY P-K





GET COPIES OF BOOKLETS NO. 480 and NO. 412

"HOW TO USE" booklet tells "where to use what" type of screw in all kinds of sheet metal. Gives complete information on application.

SCREWNAIL and MASONRY NAIL Booklet tells how these popular fasteners can save you money. Ask your P-K Distributor for Forms 480 and 412, or write Parker-Kalon Corp, 200 Varick St, New York 14.

PARKER-KALON

The Original **SELF-TAPPING SCREWS**

AND OTHER FASTENING DEVICES

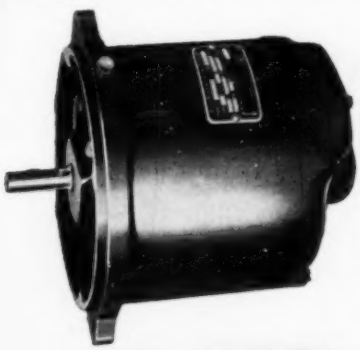
FAMOUS for long, trouble free SERVICE!

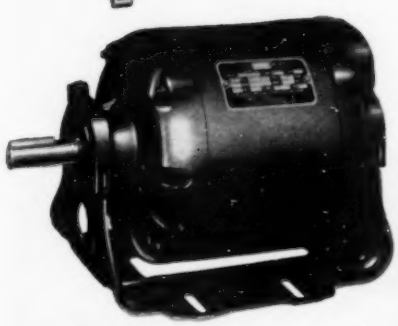
Delco motors have a record for dependability that's unsurpassed by any other motors made. Manufacturers of heating and ventilating equipment have learned from experience that Delco motors deliver continuous trouble-free service far longer than ordinary motors.

Critical selection of materials and careful dynamic balance—plus special features such as uniflow pressure-cast rotor conductors, steel backed tin babbitt sleeve bearings or ball bearings, varnish-dipped and baked motor windings—make Delco motors the motors you want for your product.

So check on Delco motors now. You'll find the motors you need, in sizes from fractional to 100 h.p., in the great Delco line. For information on motors for any application, address Delco Products, Dayton, Ohio, or our nearest sales office.

MOTORS FOR OIL BURNERS
Delco flange-mounted motors, split-phase, 50- and 60-cycle, constant speed—1/6- to 1/4-horsepower ratings.





MOTORS FOR BLOWERS
Delco resilient-mounted motors, split-phase and capacitor-start types, single- and two-speed designs—1/6- to 3/4-horsepower ratings.

DELCO MOTORS

THE BEST RUNNING MATE YOUR PRODUCT CAN HAVE

DELCO PRODUCTS
Division of
General Motors Corporation
Dayton, Ohio

DELCO DAYTON OHIO

SALES OFFICES:
ATLANTA • CHICAGO • CINCINNATI • CLEVELAND • DALLAS • DETROIT • HARTFORD • PHILADELPHIA • ST. LOUIS • SAN FRANCISCO

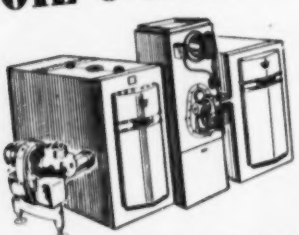
NEW PRODUCTS... YEAR 'ROUND PROFITS

backed by thirty years' sales success in home comfort!

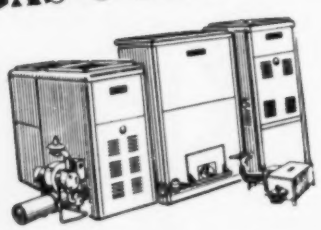
3 FULL LINES... **1** FAMOUS NAME...
4 SEASON AUTOMATIC HOME COMFORT

EUREKA *Williams*

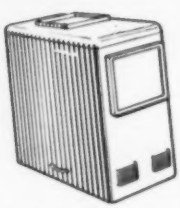
OIL-O-MATIC • GAS-O-MATIC • AIR-O-MATIC



Factory integrated oil heating equipment for every size home, every type of heating system. Boiler - Burner Units, Winter Air Conditioners, Conversion Burners.



Precision engineered, AGA approved gas heating equipment for large and small homes. Winter Air Conditioners, Gravity Furnaces, and Conversion Burners.



Newest member of a famous family. Efficient, economical, low cost Summer Air Conditioning Units for homes large and small. 2 and 3 ton capacities.

DON'T MISS
Space 2-430 thru 2-436
OIL-O-MATIC EXHIBIT
International Heating and Ventilating Exposition
Chicago, Illinois Jan. 26-30

Write today for franchise information

EW PRODUCTS

WILLIAMS OIL-O-MATIC DIVISION
Eureka Williams
CORPORATION
Bloomington, Illinois
Better Products, Better Made... *for better living!*

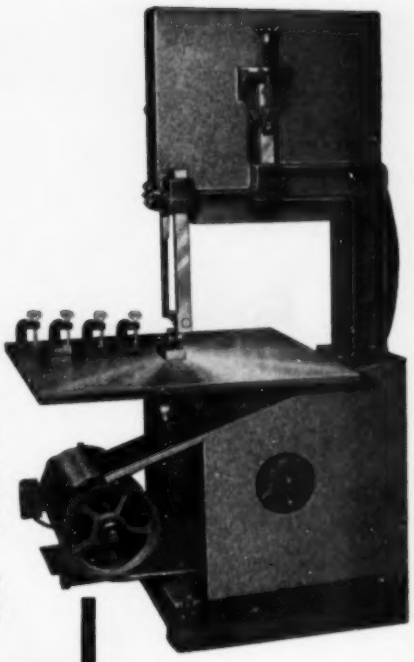


Amazing New Improved

BETT-MARR

Actually Outperforms Saws

Costing 6 Times As Much



MODEL 14 MS*

DEPTH OF CUT..8-¼"
BLADE TO FRAME... ..... 13-½"
TABLE SIZE . 20x22"
OVERALL DEPTH..34"
BLADE LENGTH..97"

*Includes set of 4 sheet metal clamps and riser bar insert to match for stacked sheet metal work.

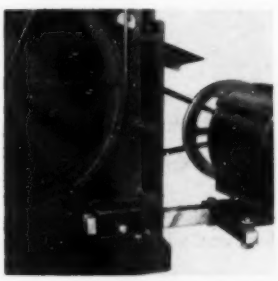
Here's a saw that's designed especially for sheet metal work and priced so low that no shop can afford to be without one. For faster, smoother, more accurate cutting of galvanized sheet metal, there's nothing better than a Bett-Marr. It is more versatile and cuts faster than larger saws costing many times more.

A Bett-Marr in Your Shop Will Pay For Itself Quickly. Cut your production costs by stacked sheet cutting. The Bett-Marr saw will actually produce duct work pieces 6 to 12 times faster than by hand. You can get more work out, faster and better, with a Bett-Marr.



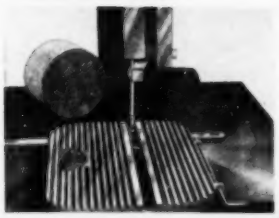
CUTS 50 TO 70 STACKED GALVANIZED SHEETS

Bett-Marr cuts 50 to 70 stacked galvanized sheets at speeds up to 15 inches per minute. It's a 14 inch ball-bearing band saw with blade speeds readily adaptable to cutting metal; plastics; wood; iron and steel castings; and forgings.



NEW FLOOR-TO-TOP ALL-CAST FRAME

The new Bett-Marr's greater stability assures accuracy and easier cutting. The simplified, adjustable motor mount is firmly anchored to frame. Ball-bearings are lifetime sealed for trouble-free performance. Blades and wheels are fully enclosed for safety.



THE ARC-MATIC

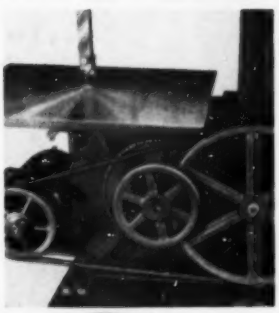
THE ARC-MATIC attachment, available as extra equipment, makes possible perfect circle cutting up to 20 inch diameters.



GET THE AMAZING FACTS! Learn how you can cut production costs with a BETT-MARR.

30° ANGLE GUIDES

30° ANGLE GUIDES are available as extra equipment for cutting lengths longer than throat depth.



125 FPM TO 2200 FPM BLADE SPEEDS

Bett-Marr can be quickly adjusted to correct speed for cutting any material without blade chatter. Cutting accuracy is assured by case-hardened guides with carbide back-up bearings (adjustable up to ½" blade width). Flanged wheels control blades for smooth radius cuts and perfect straight line cuts.

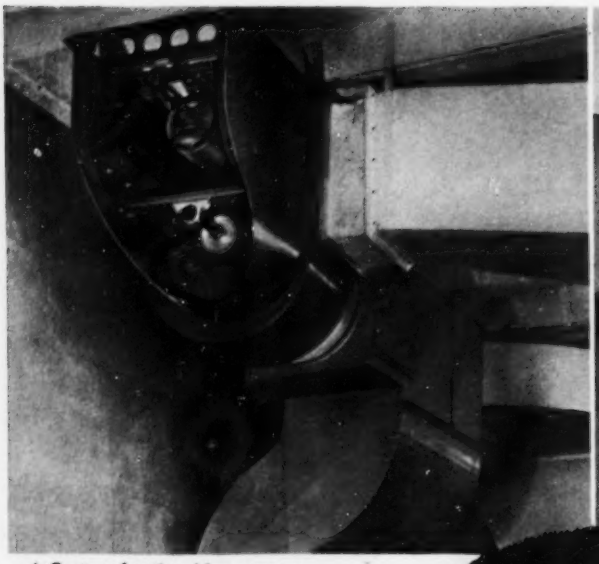
BETT-MARR MFG. CO. HOPKINS MINN.

☐ Please send me more information on the Bett-Marr sheet metal saw. ☐ Where can I buy a Bett-Marr?

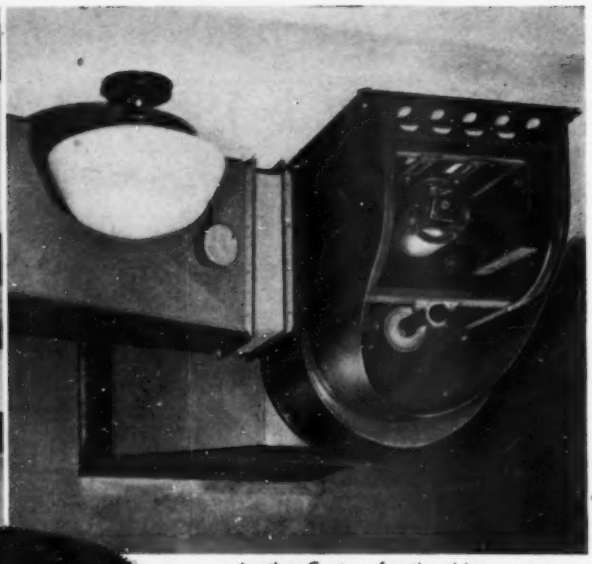
Name_____

Address_____

City_____ Zone____ State_____



A Century fractional horsepower motor on an overhead blower in a National Guard Armory used to exhaust air from the firing line of rifle range.



Another Century fractional horsepower motor used on an overhead blower in the same Armory to exhaust air from a ticket office and men's wash room.

Century MOTORS

Are Widely Used On Air Moving Equipment..

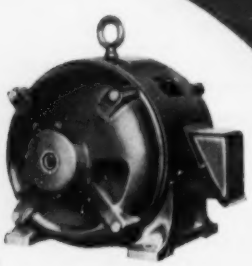
...To Assure Unusual Freedom From Vibration and Quiet Operation

Century motors are widely used on furnace blowers—ventilating systems—attic fans—unit heaters—unit coolers and many other forms of air moving equipment.

These features make Century motors ideal for your use: They start and run smoothly and quietly . . . Sturdy construction means long life . . . Insulation resists dampness . . . Modern appearance blends with equipment . . . An Authorized Century Service Station is near to give you fast service.

These typical examples show how Century motors are applied to help you get all the performance that is built into the equipment they drive.

Century manufactures a wide line of single phase and polyphase, as well as D.C. motors. Sizes range from ⅛ to 400 h.p. A variety of types each with many different specifications make it easy to choose the right motor to give the best results.



Specify Century Motors for Top Performance of the equipment you buy or for replacement.

Century C MOTORS

730

CENTURY ELECTRIC COMPANY • 1806 Pine Street, St. Louis 3, Missouri • Offices and Stock Points in Principal Cities

Announcing WAYNE Model E ...OIL BURNER

- *New!* LOW COST, HI-QUALITY
- *New!* UNEXCELLED PERFORMANCE

FOR CONVERSIONS AND PACKAGE UNITS

CAPACITY .60 TO 3.0 GALLONS PER HOUR

NOW . . . one unit for 95+% of your sales! More profit with less inventory! .60 to 3.0 gal. capacity! Fewer parts for service!



PAT. PENDING

New!

NO-DRIP NOZZLE ADAPTER

Insures sharp oil cutoff when fuel pump shuts off. Prevents after-drip. Eliminates smoke, soot and carboning.



PAT. PENDING

New!

FOUR-IN-ONE AIR CONTROL

Easily sized on the job for measuring air from blower to air cone in exact amount needed for nozzle rating. Produces highest CO_2 for fuel economy and clean firing.

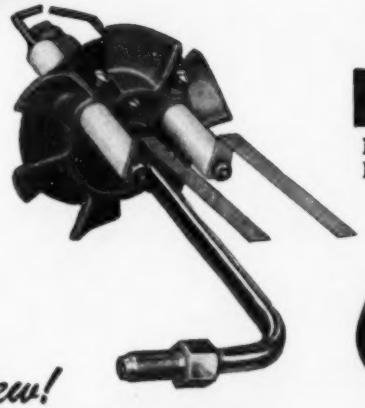


PAT. PENDING

New!

MULTIPLE INTERLOCKING AIR-ADJUSTING BANDS

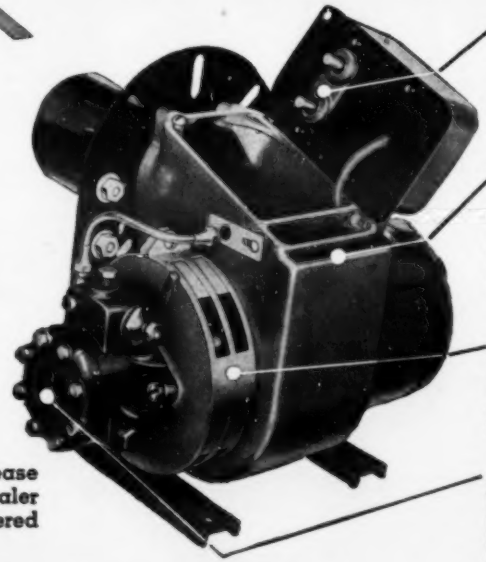
Assure ample air for 3-gallon rating. Compact design. Cadmium-plated.



New!

AIR TUBE GUN ASSEMBLY

Removable in a few seconds for inspection. Speeds servicing. Cuts installation time. Reduces costs. Adds to profits.



POSITIVE IGNITION

High tension terminals contact bronze electrode springs. Contact breaks when transformer swings open.

CAST HOUSING

Cast aluminum fan housing maintains lifetime alignment of moving parts. No vibration. Quiet. Less wear. Junction box is built in.

CONTROLLED AIR

Multiple, interlocking air-adjusting bands increase air space 33 1/3 percent. Cadmium plated steel.

INSTANT FUELING

Nationally accepted fuel unit, transformer, motor and fan coupling for availability and customer satisfaction. No service problems.

JOBBERS-DEALERS!

Reduce your inventory . . . increase your profits . . . new jobber and dealer inquiries will be promptly answered . . . write today.

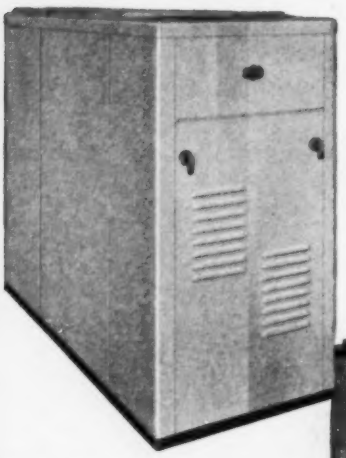
★ *WRITE FOR COMPLETE DATA AND PRICES*

WAYNE HOME EQUIPMENT CO., INC. 800 GLASGOW AVENUE FORT WAYNE, INDIANA

PROVE TO YOURSELF BARD

Oil and Gas Winter Conditioners

GIVE YOU MORE...



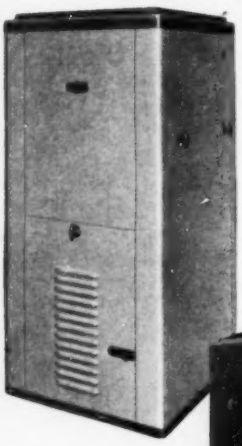
Performance is far superior due to MultiRadiator construction and efficient, carefully sized burners. Prove this with your instruments.

Profit is greater because you buy better quality for less, DIRECT FROM BARD, and you can size units accurately from the complete line available.

Referred Sales come easily through satisfied customers who "tell their friends" how BARD heat costs less. You sell more because BARD builds a better product.



Oil-fired systems are available in standard and counterflow types, hiboy and low cabinet models, and floor-inlet utility-base models. BARD offers every popular size and type to 550,000 BTU. The "NB-115" (above) is 115,000 BTU output. The "800" (right) is 75,000 BTU output. No better oil-fired systems are manufactured.



Gas-fired systems are available in gravity and forced air hiboy, floor-inlet utility-base and standard cased models in sizes to 240,000 BTU input. The "G-90" hiboy (left) is 85,000 BTU input. The "G-1" standard type (below) is 120,000 BTU input. Both have BARD Mono-Jet burners guaranteed for life!



PROVE BARD QUALITY ON THE JOB!

Install a Bard winter conditioner on one of your pending jobs. Then make any tests . . . COMPARE WITH ANY OTHER INSTALLATION. PROVE TO YOURSELF Bard's greater efficiency! THEN COMPARE YOUR PROFITS. Mail card below for prices and catalogs today.

Bard Manufacturing Co. DATE_____
Bryan, Ohio

Gentlemen:

☐ Send booklet "Automatic, Economical Oil Heat"
☐ Send booklet "Gas Heat For Better Living"

Please quote prices on the heating systems checked below for immediate delivery, advising shipping weight and nearest warehouse shipping point. (Quotation is for comparison and does not constitute an order.)

☐ ..... "NB-115" Oil-Fired System ☐ ..... "G-90" Gas-Fired System
☐ ..... "800" Oil-Fired System ☐ ..... "G-1" Gas-Fired System
☐ Advise complete details regarding BARD dealer franchise.

NAME_____
ADDRESS_____
CITY_____ STATE_____

The Complete Heating Line:

- Conversion Oil Burners to 20 Gallons Per Hour
- Oil Winter Conditioners to 550,000 BTU
- Conversion Gas Burners to 300,000 BTU
- Gas Winter Conditioners to 240,000 BTU
- Boilers to 1350 Sq. Ft. • Water Heaters

MAIL CARD FOR DEALER FRANCHISE DETAILS!

BARD MFG. CO. BRYAN OHIO

CHICAGO
STEEL PRESS BRAKES



SERIES D

Press Brakes for Heavy plate and Sheet Metal work.

Known throughout the world for their sturdy all steel construction, Chicago Steel Press Brakes—Power Brakes and Hand Brakes—are the result of over 45 years' experience in developing and building these strong dependable machines for the fabrication of Sheet Metals.

Long life and trouble-free service are built into every machine from the Heavy Steel Power Press Brake to the Hand Bending Brakes.



SERIES L

Built for Heavy sheet metal and light plate forming as well as multiple punching, shearing, etc. Built with machine tool precision for continuous high production.

WE MAKE A COMPLETE LINE OF INDUCTION HARDENED DIES FOR ALL PRESS BRAKES

• • •

A GREAT ADVANCE IN DIE MAKING

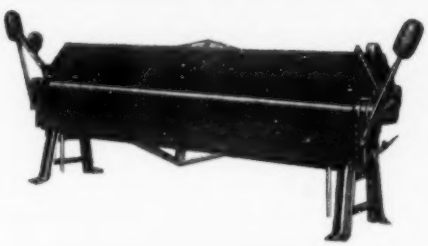
• • •

We control the DEGREE, DEPTH and the LOCATION of the HARDNESS in ONE ELECTRONIC PROCESS. This method of hardening was developed especially to meet these unusual requirements in long forming dies.



NO. 131

A NEW MODEL Industry, large and small, finds this press the answer to its needs for speed and accuracy in the manufacture of light sheet metal parts and products.



STANDARD HAND BRAKE

The accepted standard in this class of Machinery. Used in the fabrication of Modern metals such as Stainless steel, aluminum alloys and high tensile alloys.



PORTABLE HAND BRAKE

Not a bench machine. It is a Standard brake in every way, an ideal machine for general shop, trade schools, etc. Can be taken along on the job, for air-conditioning, etc.

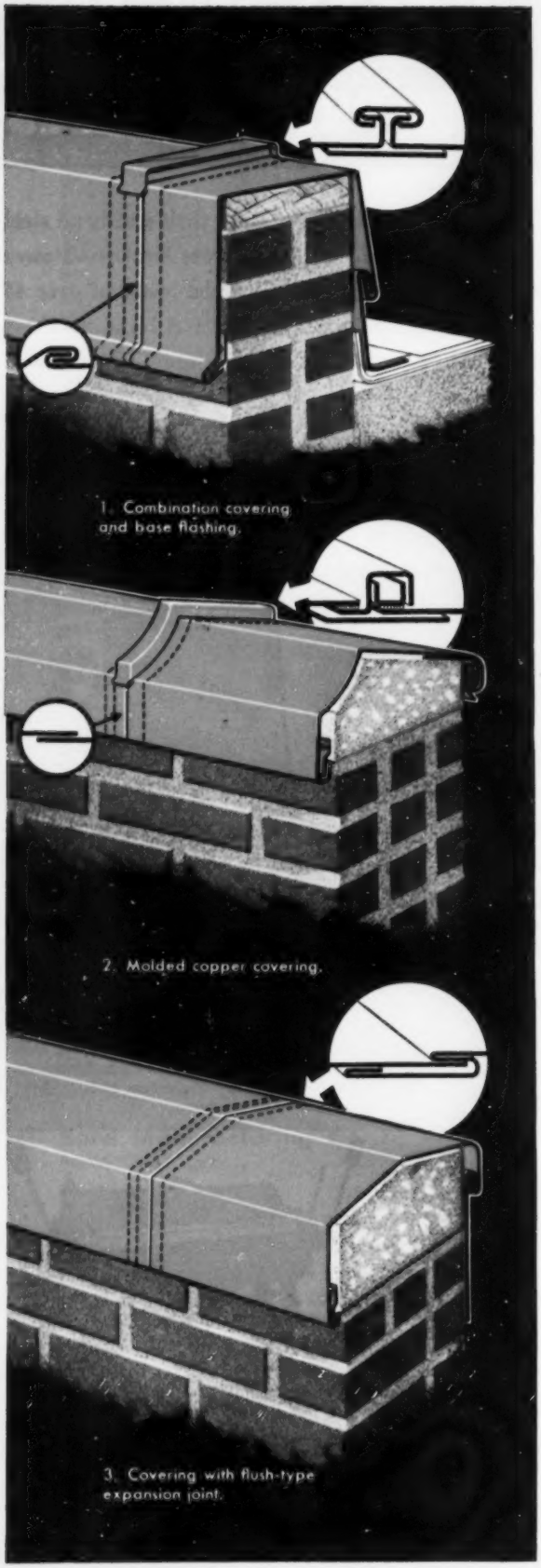


BOX AND PAN BRAKE

A universal Box and Pan Brake that combines the features of the Universal Brake with the Box and Pan Brake as well as the Standard Hand Brake. Used in manufacture of Electric switch boxes, panel board cabinets, conveyor buckets, tote boxes, Radio Chassis, etc.

DREIS & KRUMP MANUFACTURING CO.

7404 LOOMIS BOULEVARD • CHICAGO 36, ILLINOIS



How to Prevent Common Coping Troubles

. . . and provide all-weather protection

Penetrating rain and water seepage can cause serious damage to masonry copings. Especially in cold climates, where heaving occurs when water within the masonry freezes and expands.

If this trouble, which may dangerously weaken the parapet construction, is to be avoided, the copings should be covered. This work can be done better with copper and with assurance of long-lasting protection. Use copper of cornice temper (cold rolled) and of suitable gage. For installations of the sizes illustrated, 20-oz. copper is recommended. It is important that edge fastenings be free to slide, and that expansion joints be provided at intervals of not over 24 feet.

5338



Do you have the FREE Anaconda file of drawings?

Each drawing shows a new or improved way to apply sheet metal. Each is printed on a separate 8½ in. x 11 in. page, handy for quick-reference filing. This entire series may be obtained absolutely FREE. Write today for Portfolio S to:

The American Brass Company
Waterbury 20, Connecticut
In Canada: Anaconda American Brass Ltd.
New Toronto, Ontario

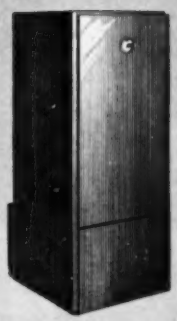
for better sheet metal work—

USE

ANACONDA®

COPPER

A PROFITABLE BUSINESS



Gas or Oil-Fired Winter Air Conditioners—Hi-Boys



Gas or Oil-Fired Winter Air Conditioners—Lo-Boys

As a Chrysler Airtemp Authorized Dealer, you have your best opportunity for year 'round profits. Here's why:

- Your selling job is easier because people have confidence in the quality of Chrysler Airtemp products.
- Consistent national advertising tells the benefits of modern heating and air conditioning to your prospects. It creates a demand for Chrysler Airtemp products—makes your selling job easier.
- You can make extra profits selling Chrysler Airtemp cooling with your heating jobs.

Get the facts today. See what a profitable business is waiting for you!

Mail the coupon for full details.



Focused-Flame Oil Burners



Year-'Round Air Conditioners

Chrysler Airtemp

Comfort Zone

HEATING • AIR CONDITIONING FOR HOME, BUSINESS, INDUSTRY

AIRTEMP DIVISION OF CHRYSLER CORPORATION
DAYTON 1, OHIO



Airtemp Division of Chrysler Corporation
P.O. Box 1037, Dayton 1, Ohio

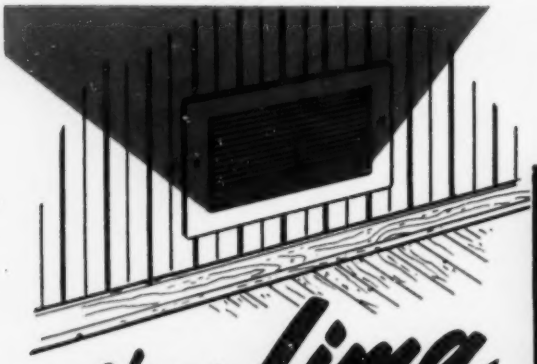
AA-1-53

I would like to know more about Chrysler Airtemp's franchise arrangements.

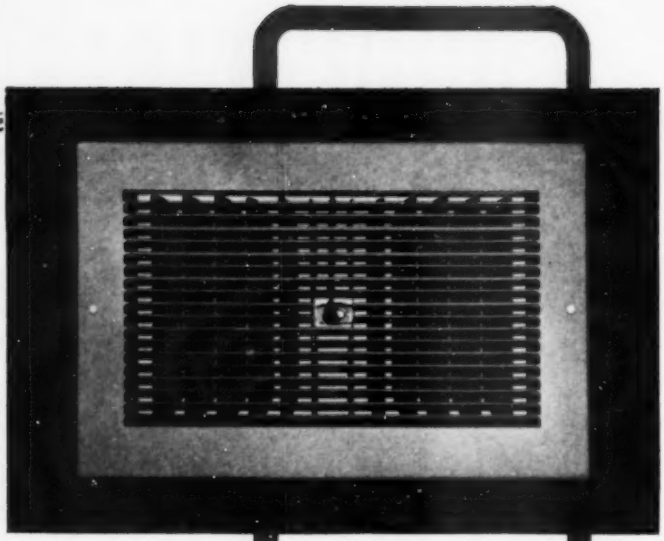
Name_____

Address_____ Phone_____

City_____ Zone____ State_____



New Lima "45" wall diffuser



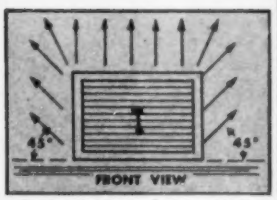
for top efficiency in perimeter heating with side wall or baseboard outlets

Again Lima leads with the finest. The new Lima "45" Wall Diffuser offers all the advantages of perimeter heating from side wall or baseboard outlets.

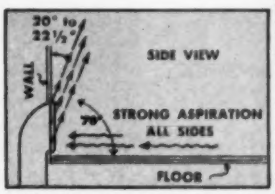
Compare the diffusion pattern shown here with any wall diffuser on the market. See how much more effectively it provides correct air distribution . . . induces continuous recirculation of air without drafts . . . assures highest efficiency and complete customer satisfaction.

Exclusive Lima "Balancing Bell" eliminates quadrant dampers and simplifies balancing. Any housewife can make the adjustment at the diffuser.

Immediate delivery in 2 sizes, 10" x 6" and 12" x 6". Plan now to use the Lima "45" on your next perimeter heating installation where side wall or baseboard outlets are preferred. For complete literature see your local wholesaler or write direct.



Front view of Lima "45" Wall Diffuser air pattern. Note how warm air is sprayed upward and to all sides at reasonably high velocity, starting at 45° from floor and extending over a 90° spread.



Side view Lima "45" Wall Diffuser air pattern showing 20-22½° angle away from wall which eliminates streaking. Notice the correct 70° angle from floor for top efficiency.



For Simplified Out-Of-The-Wall Installations In Old House or Solid Wall Construction

Install Lima WALL-O-WAY Stackhead And Frame In Combination With The New Lima "45" Wall Diffuser Or Lima Standard Wall Register

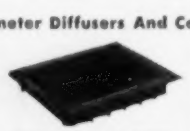
See how easily you can now make out-of-the-wall installations with the Lima Wall-O-Way. Prefabricated stackhead snaps into any standard 3¼" stack or fitting — no cutting or folding back. Exclusive Lima double gasket seals against dirt streaks.

For warm air outlets, install stackhead and frame using the new Lima "45" Wall Diffuser or Lima standard Wall Register. **For cold air outlets,** install frame only, using Lima standard Flat Sidewall Grille.

The World's Finest Perimeter Diffusers And Complete Register Line



LIMA FLOOR DIFFUSER



LIMA FLOOR REGISTER



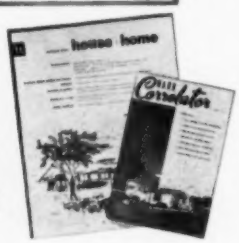
LIMA WALL REGISTER

sold exclusively through heating wholesalers and manufacturers

Lima Register Company
World's Finest Diffuser and Register Plant
LIMA, OHIO

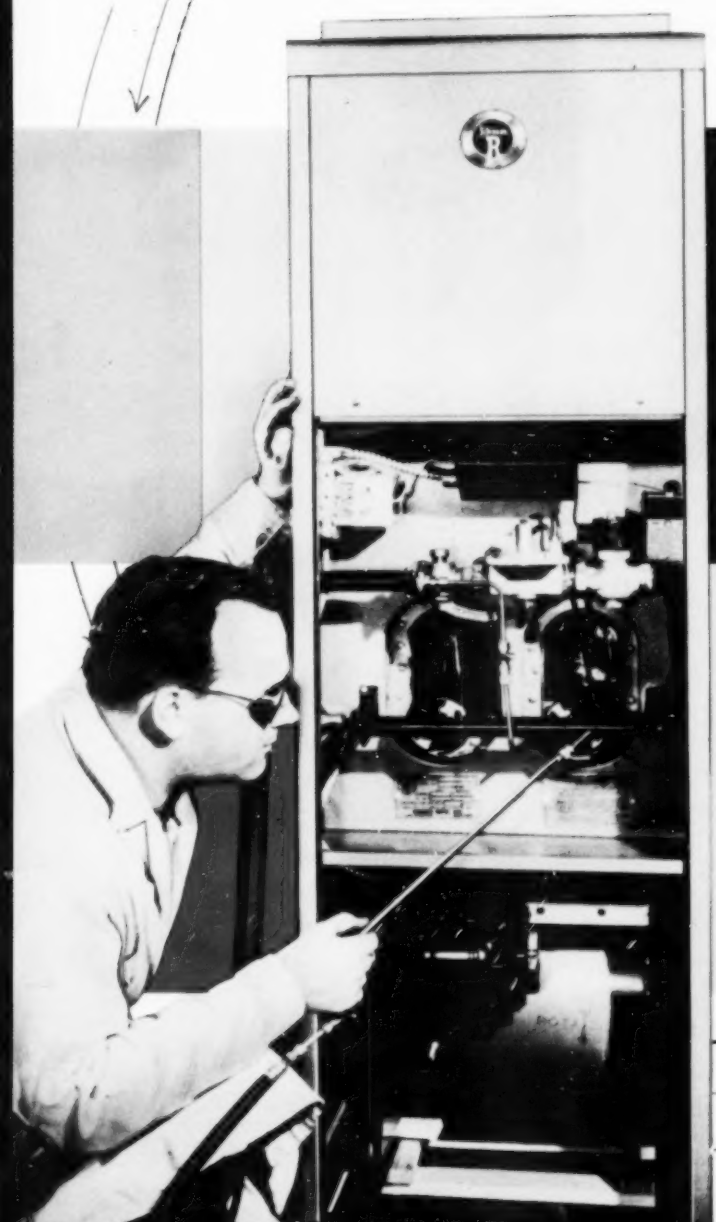
Nationally Advertised To Builders And Architects

See Us At Booth 521 International Heating, Ventilating And Air Conditioning Exposition



RHEEM

GAS-FIRED WINTER AIR CONDITIONERS AND WARM-AIR FURNACES FOR EVERY HEATING NEED!



FACTORY-ASSEMBLED AND FIRE-TESTED

Rheem

Ready to install!

Ready for profits!

©1953 RHEEM MFG. CO.

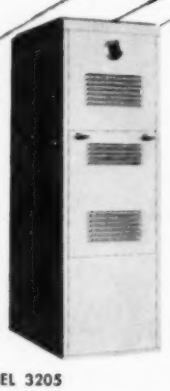
You can rely on

RHEEM

anywhere everywhere



MODEL 3202



MODEL 3205



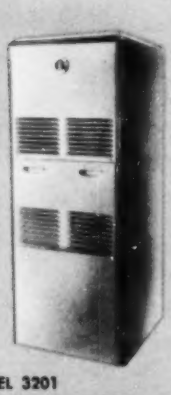
MODEL 3302



MODEL 3203



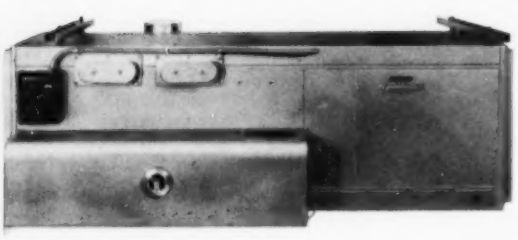
MODEL 3402



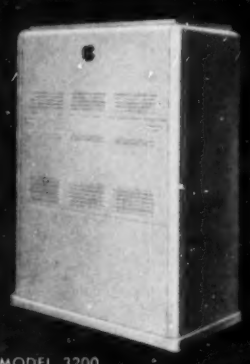
MODEL 3201



MODEL 1801



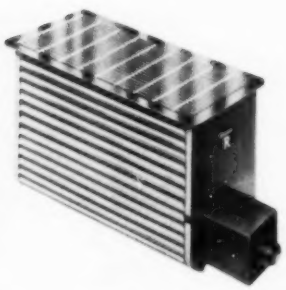
SERIES 2400



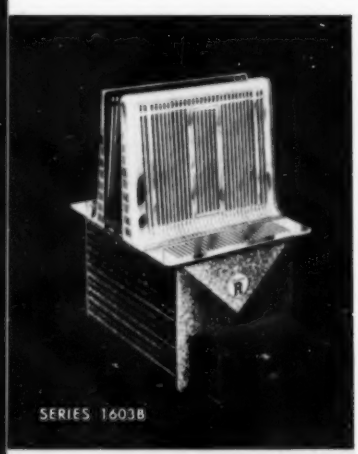
MODEL 3200



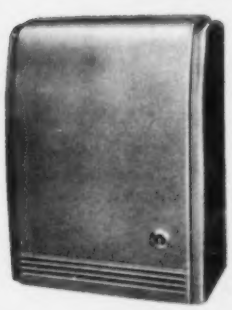
MODEL 2436



SERIES 1603B



SERIES 1603B



MODEL 1703

WINTER AIR CONDITIONERS

Fully automatic, factory assembled, forced warm-air furnaces. All-steel, electrically welded. "Flame-shaped" combustion chambers and multi-section heat exchangers provide high heat transfer. Enclosed controls; large capacity blower-motor, baked enamel finish. AGA approved. Available in 12 ga. and 16 ga. heat exchangers.

Model 3202—Hi-boy—for first floor utility room or basement installations. Top rear flue outlet. Casing sides equipped with knock-out plates for optional side cold air return. Five sizes from 66M through 150M Btu input. AGA approved for all gases, including LP-AIR. Dual-gas units available.

Model 3203 — Hi-boy — same as Model 3202 but with top front flue outlet. Six sizes, 60M—150M Btu input. Lower input range for zero clearance.

Model 3402—Lo-boy—for basement installations. Top rear flue outlet with built-in draft diverter. Four sizes from 77M through 150M Btu. Available for all gases, including dual-gas operation.

Model 3201 — Zero clearance approved for closet, utility room, basement. Seven sizes, 60M — 150M Btu input.

Model 3205—Counterflow—for perimeter heating applications. Blower-filter assembly mounted in top of unit. AGA approved for zero clearance and installation on combustible floors with all gases. Two sizes; 80M and 100M Btu input.

Model 3200 — For large homes, churches, stores. Five sizes, 168M—350M Btu input.

GAS-FIRED GRAVITY FURNACES

Model 3302 — Fully automatic, factory assembled. Low cost installation and operation. "Flame-shaped" combustion chamber and multi-section heat exchanger. Inner casing insulation, enclosed controls. AGA approved for all gases. 77M, 95M, and 112M Btu input sizes.

RECESSED WALL HEATERS

Model 1801—For small homes and "hard to heat" rooms. Fits between 16" studding. 60" high, 17" wide . . . projects 5". Single wall unit—28M Btu input; dual wall—50M Btu. Thermostatic or manual controls.

OIL-BURNING FURNACES

Model 2436—Oil-burning winter air conditioner provides economical home heating. "Flame-shaped" combustion chamber and multi-section heat exchanger. Blower and motor assembly rubber cushioned for quiet air delivery. Automatic controls. Available in three lo-boy sizes; 75M, 85M and 100M Btu bonnet output capacities.

CONSOLE HEATERS

Model 1703 — Minimum space requirements. AGA approved for natural, manufactured, mixed and LP gases. 25M, 35M and 50M Btu input sizes.

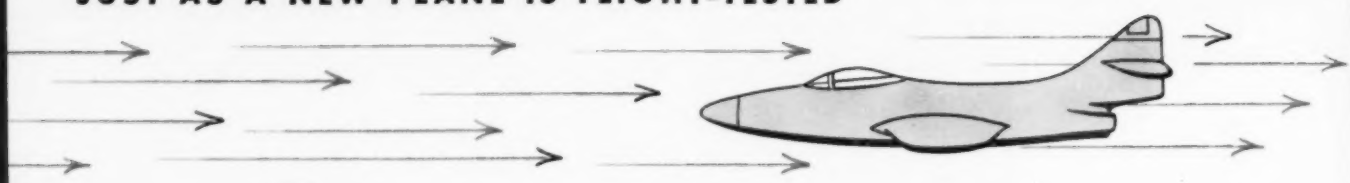
FLOOR FURNACES

Series 1603B—Flat register and dual wall types. 25½" overall depth. Rapid noiseless heat recovery. AGA approved for all gases.

HORIZONTAL FURNACES

Series 2400—Electrically-welded all-steel heat exchanger, enclosed controls. AGA approved for natural, manufactured, mixed and LP gases. 60M, 80M and 100M Btu input sizes.

JUST AS A NEW PLANE IS FLIGHT-TESTED



Every

RHEEM

Gas Furnace is

FIRE-TESTED



Every Rheem gas furnace *proves* its perfect, trouble-free performance before delivery. It is completely assembled, the pilot is lighted, burners are fired. Then a trained inspector checks the complete operational cycle. Every control, pipe connection, and moving part is proved. Then the Fire-Tested Rheem furnace is packaged for delivery, ready for quick, trouble-free, *profitable* installation.

COMPLETE QUALITY CONTROLS

Rheem manufacturing is controlled and inspected at every point. And new developments continually *raise* Rheem quality standards.

EXCLUSIVE FLAME-SHAPED COMBUSTION CHAMBER

Like the Franklin stove, the oil lamp, and the jet engine — Rheem combustion chambers are flame-shaped to insure complete combustion. Combustion chamber and heat exchanger walls are completely wiped by hot gases. Heat transfer is rapid and complete . . . fuel consumption is minimized . . . the whole unit is quieter and more compact. You can rely on Rheem!

RHEEM MANUFACTURING COMPANY, INC.
570 Lexington Avenue, New York 22, N. Y.
22 plants around the world.



Taking the Stains and Strains out of DUPLICATING

Duplicating letters was a messy, tedious job in the '90's. If a girl was extremely efficient, she could turn out *five* copies per minute.

How different today—motor driven machines, featuring automatic inking and feeding, make *180 copies per minute* with ease!

Dramatic progress, such as this, has followed the motorizing of equipment used in business, in industry, in the home, and on the farm, too.

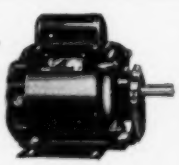
Throughout our 63-year history Emerson-Electric has been called upon by many of the nation's leading manufacturers to design and produce dependable, efficient motors for their applications.

Get detailed information on how Emerson-Electric motors, in ratings from 1/20 h.p. to 5 h.p., can add new sales appeal to your product.

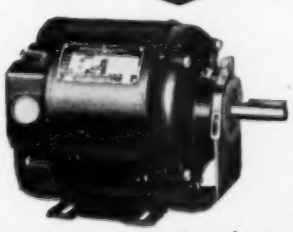
Write...THE EMERSON ELECTRIC MFG. CO., St. Louis 21, Mo.

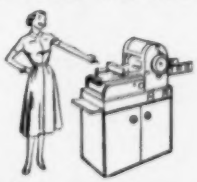
MODERN BUSINESS IS POWERED WITH ELECTRIC MOTORS

EMERSON-ELECTRIC MOTORS
For Belted Fans and Blowers



These motors incorporate all the electrical and mechanical specifications best suited for this service. Split-phase motors, available in 1/6, 1/4 and 1/3 h.p., with resilient mountings and automatic reset thermal protectors. For complete data write for Motor Bulletin No. M165.





A. B. Dick Co., builder of modern Mimeographing equipment is a user of Emerson-Electric motors.

EMERSON ELECTRIC
MOTORS • FANS APPLIANCES

LEADERS IN THE MOTOR AND FAN INDUSTRY SINCE 1890



A COMPLETE LINE for GAS, OIL, or COAL

Ample Stocks • Priced to sell

Series F600 Lo-Boys, Hi-Boys



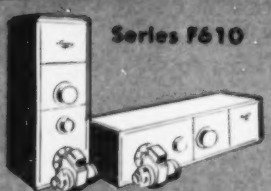
9 Sizes Oil Lo-Boy & Hi-Boys
70-180M Btu's

Series GB-2, 2.5, 4



Cast-iron, Gas-fired boilers
33 Sizes to 12,690 sq. ft.

Series F610



Combination Oil-fired counterflow units
7 Mods. 80-100M Btu's

Automatic Water Heaters



Gas-fired
12 Mods. 20-66 gals.

Series F500 Lo-Boys



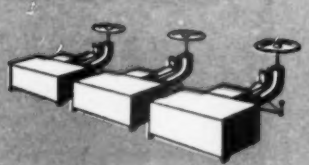
6 Sizes Gas Lo-Boy
80-220M Btu's

Series OF600



5 Sizes Oil Gravity
50-120M Btu's

Series GCB



Gas Conversion Burners
3 Mods. 60-300M Btu's

"Wonderful! I've got a money-maker in Borg-Warner's NORGE HEAT"

We know what it means to you to be certain of prompt deliveries and friendly cooperation in doing business. That's why Norge Heat distributor facilities have been expanded to provide "Johnny-on-the-spot" service—that's why you can expect all other factory and distributor services that will help you do a better job, more profitably.

There is a Norge Heat unit for every home heating need. Priced right, every Norge Heat unit is a *money-maker* for you.

For complete details

See your Norge Heat wholesaler or write direct to: Norge Heat, 346 E. South St., Kalamazoo, Mich.

Series F500 Hi-Boys



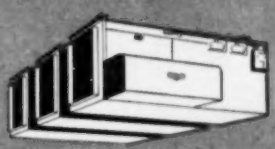
6 Sizes Gas Hi-Boy
62.5-120M Btu's

Series GF710



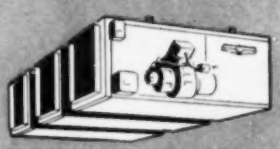
Gas gravity furnaces
4 Mods. 80-150M Btu's

Series F800



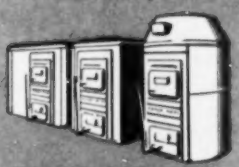
Gas-fired horizontal furnaces
3 Mods. 60-100M Btu's

Series OF600-S



3 Sizes Oil Stowaway
80-180M Btu's

Series F300, F400



15 Sizes Coal Gravity
and W.A.C.'s 20"-27"

Series B100, 200, 300, 400



Oil or Gas Square Boilers
5 Sizes to 1440 sq. ft.

Series COB



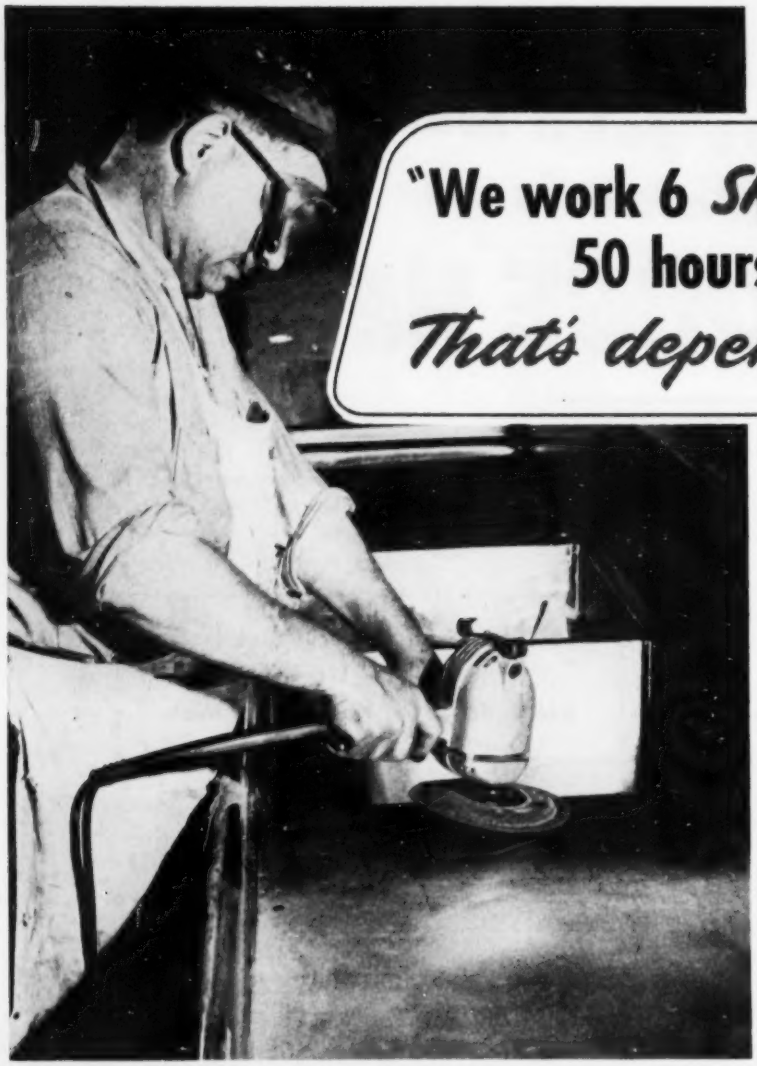
Oil Conversion Burners
3 Mods. 0.6-12.0 gal. per hr.

NORGE HEAT

BORG-WARNER CORPORATION

Manufactured in KALAMAZOO, MICH.

BW



"We work 6 *SKIL* Disc Sanders 50 hours a week— *That's dependability!*"

says **Joe Claire**
of the **Dohrmann Hotel Supply Company,**
Los Angeles, California

This organization specializes in making kitchen equipment for hotels, restaurants and institutions. Tool inventory includes six Model 551 SKIL Disc Sanders and two Model 241 SKIL Drills. In the photo at left, Joe Claire resurfaces an area of stainless steel. He says, "For ten hours a day, five days a week, we give our SKIL Disc Sanders constant use. With the weight centered over the sanding disc, you don't have to fight motor torque to apply pressure—just use weight of the tool. I'm sure *sold* on SKIL engineering, quality and low maintenance cost!"



Paul Johnson uses a Model 241 SKIL DRILL in the fabrication of a sink.

He says, "It's easy to handle and has plenty of reserve power. The SKIL Drill is the best I've ever used!"



SKIL Disc Sander—Model 551

Fully powered, low-priced disc sander for special duty work. Perfect balance for ease of operation and accuracy. Full size 7" disc. Other Models for specific duties.

SKIL Products are made only by SKIL Corporation,
formerly SKILSAW, Inc.
5033 Elston Avenue, Chicago 30, Illinois

Factory Branches in 34 Principal Cities
In Canada: Skiltools, Ltd., 3601 Dundas Street W. Toronto 9, Ont.

SKIL
PORTABLE TOOLS

SEE YOUR DISTRIBUTOR OR CALL YOUR NEAREST SKIL FACTORY BRANCH



Standard is always first with the finest

here it is...
the floor register everyone wants!

STANDARD'S NEW PERIMETER FLOOR REGISTER

with Standard's exclusive

Dialamatic Control

Standard's new, exclusive dialamatic control gives you POSITIVE HEAT CONTROL. The set screw arrangement means easy balancing, trouble-free operation!



Duct opening	Overall of Louvre Box	Overall of Face	Open Area	Depth of Box
2¼" x 14"	2⅛" x 13¾"	3¾" x 15⅜"	80%	2⅛"

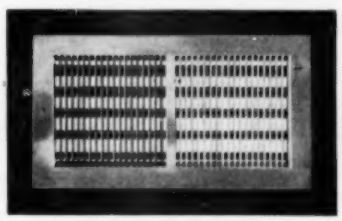
SPECIFICATIONS

The blades of model PH-142 are fabricated of 16 gauge steel, the blades are set in a fixed-fan angle degree for even deflection. The Frame is of one piece, 18 gauge steel construction. The Louvre box fabricated of 16 gauge steel. Packed one to a box, and 20 to a master carton. Comes handsomely finished in gleaming, durable metallic-lustre finish.

BOOTH 317 11th ANNUAL HEATING AND VENTILATING EXPOSITION

THE NEW, IMPROVED *multiple valve* REGISTER

Has Horizontal Multiple Valve Louvres, and 3/16" turned down edge for flush sidewall installation. The attached sponge rubber gaskets are an *extra* feature that prevents escape of air and chipping of wall surface. The Louvres are adjustable so that the flow of air may be directed either downward, straight forward, upward, or to complete shut-off.



MODEL NO. 331

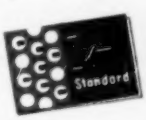
Metallic Finish standard finish on this style



MEMBER NATIONAL WARM AIR HEATING AND AIR CONDITIONING ASSOCIATION INDOOR COMFORT

write now!

No cost or obligation to you



Standard Stamping and Perforating Co.

3151 West 49th Place—Chicago 32, Illinois

Gentlemen: Please send me your new pocket catalogue at no cost to me.

NAME_____

ADDRESS_____ CITY_____ ZONE_____ STATE_____

COMPANY NAME

This air conditioning package can revolutionize your selling plans



Home buyers across the country want packaged, year-'round air conditioning to fit the needs and the budget for low-cost homes—Servel has it NOW for your greater profit!

Using clean, dependable gas as fuel, Servel's revolutionary, entirely new, entirely different, packaged Air Conditioner will be completely practical for homes costing as little as $10,000.

This is not just a smaller version of Servel's established line of *All-Year* Air Conditioning, but a completely pre-assembled package. Just wheel it in, set it down, make a few simple connections, and you have air conditioning! And instead of presenting space and air-distribution problems, this compact heating-cooling package solves them, and allows new freedom of home layout besides!

This all-new heating-cooling plant is built to open up an entirely new and extremely rich market for Servel dealers. And it is priced right—even for homes as small as five rooms. *It requires only about 8 square feet of floor space.*

This new Servel unit, using gas to heat *and* cool, and with no moving parts in either the heating or cooling system, presents no electrical load or wiring problems. Most important, it has all of the great features that have put Servel *All-Year* Air Conditioning in more homes than any other make. Operation is most economical and, because of the no-moving-parts design, vibration and noise are cut to a minimum (particularly important in small homes). It carries a full five-year warranty. It gives home buyers *all seven* of the benefits of true year-'round air conditioning:

1. **Heats in winter.**
2. **Cools by refrigeration in summer.**
3. **Cleans the air.**
4. **Removes excess moisture from the air on hot days.**
5. **Adds needed moisture to the air on cold days.**
6. **Circulates the air.**
7. **Ventilates with outside air.**

This great new Servel package will be released soon. You'll see it at the N.A.H.B. show at Chicago January 18-22. Now is the time to build a real permanent success from air conditioning sales by representing this famous, respected name. See your Servel distributor, or write for full details to Servel, Inc., Dept. AA-1, Evansville 20, Indiana.

Servel

The name to watch for great advances in—

AIR CONDITIONING ✓ REFRIGERATION

MEYER

Marvellaire

M-V

small duct system

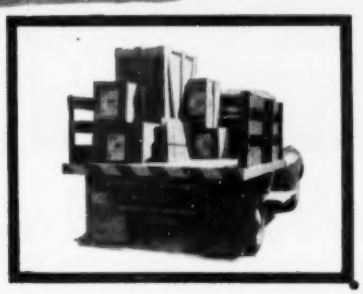
pre-packaged for fast handling...

pre-engineered for quick assembly...

GREATER PROFITS for DEALERS



*MARVELLAIRE M-V SYSTEM — Includes perimeter diffusing type registers and grilles, plenum chambers, take-off fittings, boots, elbows, 4-in. ducts and correct size Meyer Winter Air Conditioner.**



A Heating System in Half a Load!

It's not the great bonanza for furnace dealers, but it sure is the next thing to it. That is, if cutting inventory, labor costs and paper work and handling more jobs means something to you! Here's why the Meyer MARVELLAIRE M-V SYSTEM means greater profit for you:

Pre-engineered in factory — Practically eliminates inventory problems! Made to fit your requirements for quick assembly . . . speedy installation.

Completely packaged system — All parts, including pipe, fittings and registers, are packaged for easier handling and storage.

Simple to order — No lengthy order blanks to fill out.

Uses 4" ducts — Easier to handle and install.

Competitively priced — Priced to meet and beat competition.

All this adds up to a faster turnover for you. And you're not selling the customer short . . . not by a long shot!

Better heat for less — Marvellaire M-V System, developed in the laboratories of Weir-Meyer, produces a healthful, uniform floor-to-ceiling warmth throughout the home with a gentle, steady flow of heated air — not at all like the noisy high velocity installations. Our tests in homes under actual operating conditions show greater efficiency and more economical operation, too. It's ideal for new homes or old . . . with or without basement.

**All Meyer Forced Air Furnaces in the famous Weir-Meyer line have been engineered for the MARVELLAIRE M-V SYSTEM.*

The MEYER Furnace Company

MANUFACTURERS OF WEIR & MEYER

FURNACES AIR CONDITIONERS FOR GAS • OIL • COAL

GENERAL OFFICES: PEORIA, ILL. • FACTORIES: PEORIA AND PERU, ILL.

Mail this coupon today!

THE MEYER FURNACE CO.

DEPT. A-23, PEORIA 1, ILLINOIS

Please rush facts on Weir-Meyer's latest development in home heating — MARVELLAIRE M-V SYSTEM — and information on becoming a Weir-Meyer dealer . . . at no cost or obligation.

NAME_____

ADDRESS_____

CITY_____ STATE_____



OWENS-CORNING
FIBERGLAS
DUST STOP*
AIR FILTERS

Make your cash register Sing!

New midwinter DUST-STOP promotion starts January 14th, spearheaded by Arthur Godfrey on CBS television and radio, reaching 9,000,000 people weekly. Emphasis is on midwinter replacement of filters for greater comfort and fuel savings. Tie in for extra profit. Use our free display, promotion aids. Owens-Corning Fiberglas Corporation, Department 35A, Toledo 1, Ohio.

*FIBERGLAS and DUST-STOP are trade-marks (Reg. U. S. Pat. Off.) of Owens-Corning Fiberglas Corporation for products made of or with fibers of glass.



Hurry hurry hurry—see the sensation of the forced air furnace field! Utility's 70FA Forced Air Furnace is breaking sales and popularity records all over the lot. That's because its 70,000 BTU input gives large home heating at small home cost. Yes, its performance is so high and its price is so low that home owners everywhere are buying Utility. Stock it today and watch your box office profits skyrocket! Super-quiet Dy-Rekt* drive blower assembly . . . Sy-Lent* Heat Exchanger . . . approved for zero clearance...easy to install, can be spotted in only 14" x 25½" floor space (in closets, alcoves, etc.) . . . AGA approved. *Pat. Pending

Second big hit is Utility's 50RD Recessed Dual Wall Heater. It pulls in the customers because it's amazingly low in price . . . does a double-feature heating job and delivers the air at living level where it really does some good. Prospects love its cool-to-touch Fiberglas insulated panel. And it has fully automatic controls . . . fits between standard 16" center studs . . . 50,000 BTU input. Utility's 50RD Recessed Dual Wall Heater is 60" high, and the front panel is 17" wide . . . and the unit is as handsome as a matinee idol! Stock Utility's 50RD now . . . you'll have a real crowd-pleaser on your Utility Heating Equipment show!



YOU'LL HAVE A BETTER BOX-OFFICE TAKE THE YEAR 'ROUND WITH UTILITY HEATING AND COOLING EQUIPMENT

UTILITY
TRADE MARK
Guaranteed Heating Performance

The Complete Line of Automatic Gas Heating Equipment

UTILITY APPLIANCE CORP.

4851 S. Alameda Street Los Angeles 58, California

Manufacturers of Air Coolers, Blowers, Gaffers & Sattler and Occidental Automatic Gas Ranges



MAIL COUPON TODAY FOR FREE LITERATURE!

UTILITY APPLIANCE CORP. A-153
4851 S. Alameda St., Los Angeles 58, Calif.

Please send me information about how I can build bigger year 'round business with Utility Heating and Cooling Equipment.

Name _____

Address _____

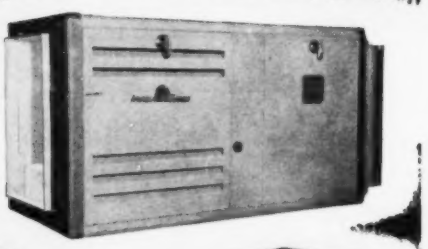
City _____ *State* _____

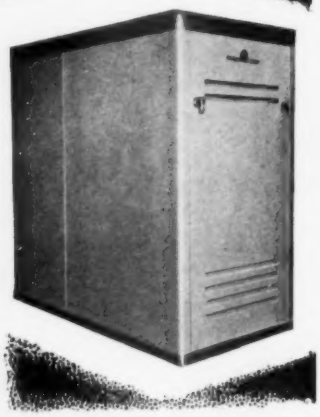
AFCO'S B. T. Udee Says...

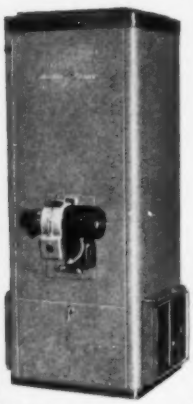


JOIN ME IN '53 . . . MY DEALERS GET MORE!

A COMPLETE LINE FOR COMFORTIZING







Over 70 models and sizes to choose from. Automatic Gas and Oil Fired . . . Coal Fired Heating Units . . . Combination Heating and Cooling Units.

"Hi-Boy" Base-Blo and Counter-Flo Models. Conventional Modern Air Models. Space Saving Horizontal Models. Plus Oil, Gas, Coal Conversion Units.

A DEPENDABLE SOURCE OF SUPPLY

Every unit backed by AFCO, for more than half a century exclusive manufacturers of "Sound Value" comfort conditioning equipment.



CENTRAL SHIPPING POINT

Plant and Warehouse located at the hub of the Nation assuring rapid delivery whether by rail or truck.



FREIGHT ALLOWANCE

Inquire for particulars on carload, truckload and LCL or LTL shipments.

Write for complete details regarding AFCO Dealer Franchise and for Combination Heating and Cooling catalog.

AFCO SINCE 1900

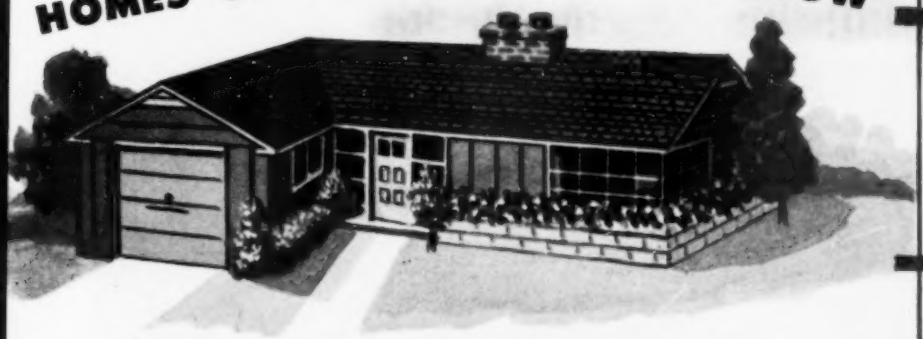
AMERICAN FURNACE COMPANY

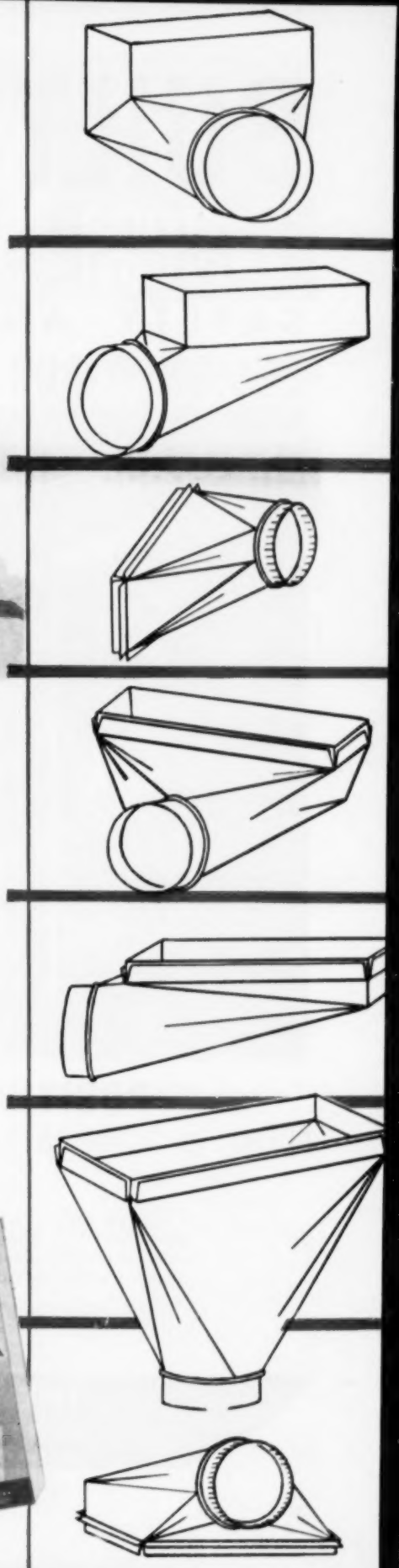
1300 HAMPTON AVENUE • ST. LOUIS 10, MO.

Handy

PIPE AND DUCT WORK

FOR HOMES OF TODAY AND TOMORROW





Thru the years, F. Meyer & Bro. Co., established 87 years ago, have been designing and producing the highest standards of furnace pipe, fittings and duct work bearing their long-famous "HANDY" trade mark.

Today this nationally-known product is made in properly designed fittings for **gravity, forced air, outside wall** and **velocity** installations . . . fittings that mean fast, profitable progress on the jobs and long years of satisfaction to the property owners.

We are all set to help you make 1953 a big year.

F. MEYER & BRO. CO.

PEORIA, ILLINOIS

AIR DISTRIBUTION INSTITUTE
ADI
STANDARDIZED FITTINGS
MEMBER

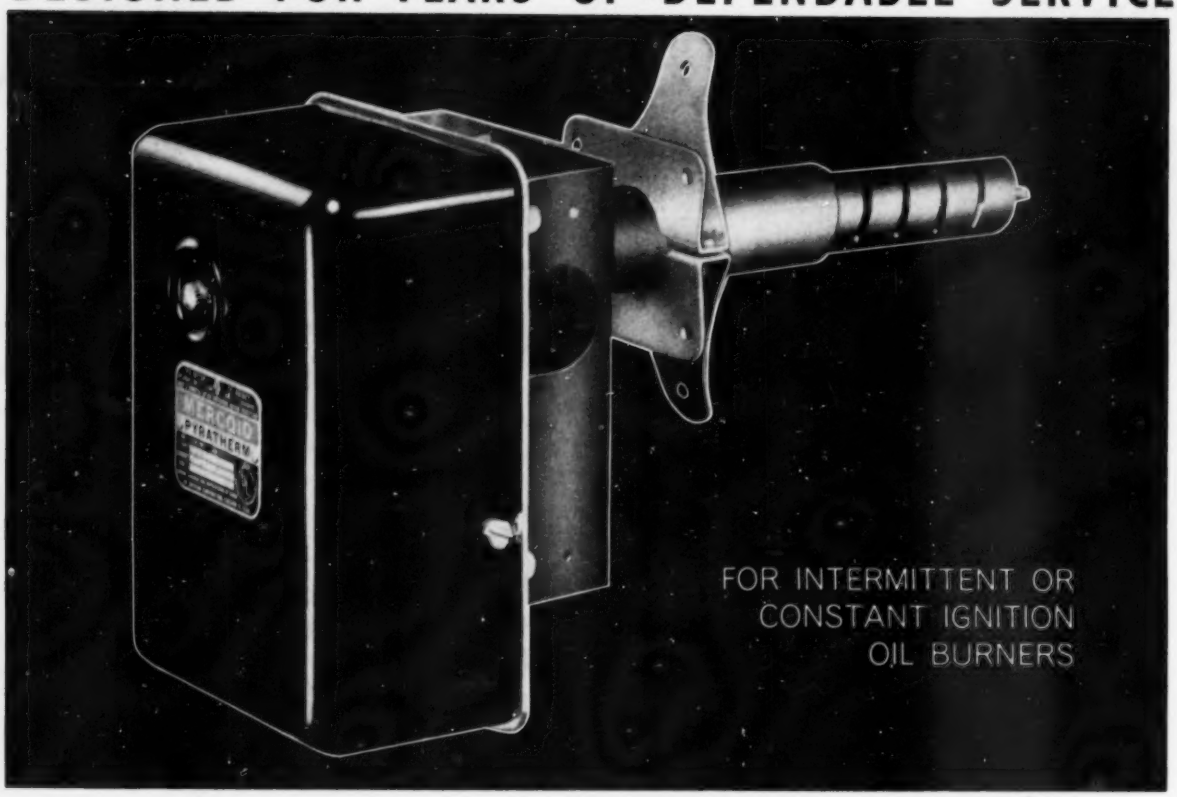


If you do not have our catalog No. 53 a request will bring it.

BUILT TO TAKE IT!

M·E·R·C·O·I·D®

SAFETY AND IGNITION CONTROLS DESIGNED FOR YEARS OF DEPENDABLE SERVICE



POSITIVE PROTECTION AGAINST

FLAME OR IGNITION FAILURE — LOW LINE VOLTAGE — POWER FAILURE

EASY TO INSTALL

Equipped with reversible mounting flange for curved or flat surfaces—adjustable air vent—1-1/4" insertion stem—simple two wire hook-up (no color to color wiring) —all terminals plainly marked—three Mercoid sealed mercury switches are used (motor switch, ignition switch and safety switch).

Write for your copy of the 48 page Mercoid Oil Burner Controls Handbook . . . it contains wiring hook-ups, installation instructions, service hints and comparison charts—free for the asking.

THE MERCOID CORPORATION

4209 BELMONT AVENUE · CHICAGO 41, ILLINOIS

New York: 205 E. 42nd St. · Philadelphia: 3137 N. Broad St.

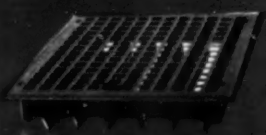
FOR EVERY HEATING AND AIR CONDITIONING NEED...

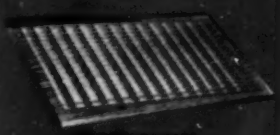
A-J

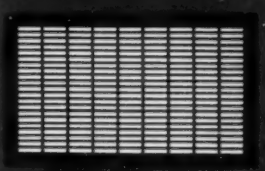
GRILLES and REGISTERS

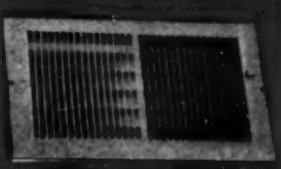
Available in Wide Range of Sizes, Patterns, Finishes and Metals













No-Vision GRILLES

Completely "sight-proof". Channel frame with steel "V" shaped louvers set on approximately ½" centers. Choice of 2 style frames: Channel or Flange. Adjustable auxiliary frame (as illustrated) available at extra cost. Maximum free area. Core thickness, 1". Available any size, choice of finishes.





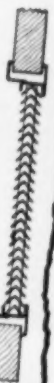
Thin Core GRILLES



For Doors & Partitions ¼" to ¾" THICK!

- **Cuts Installation Time Over ½!**
- **Easy to Install — Anyone Can Do It!**
- **Complete — No Wood Moldings To Add!**

Telescoping auxiliary frame fastens to grille with posts and screws. Clamps tight. No holes to position. Practically ends danger of ruining door. All steel. No vision — 80% free area. All sizes — frame optional. Choice of finishes.



Grilles for PERIMETER HEATING

Designed for floor use, or in walls with high velocity system. Heavy gauge curved vanes factory-set for fan-shaped air pattern. Single adjustable valve in 2¼" width, adjustable multiple valves in 4" and 6" widths. Available in 10", 12", 14" lengths; oak finish or prime coat.



FREE CATALOG

Listing Over 1000 Sizes and Styles of Grilles, Registers and Diffusers.

MAIL THIS COUPON TODAY!

A-J Mfg. Co.
Dept. A-1, 2119 Washington St.
Kansas City 8, Mo.

Please rush me a copy of your catalog of Grilles, Registers and Diffusers.

Name .....

Firm .....

Address .....

City ..... State .....

DEALERS — JOBBERS
Write Today for
FREE CATALOG

A - J
MANUFACTURING CO.
Dept. A1 · 2119 Washington
Kansas City 8, Mo.

Announcing New Literature on New Air Handling Equipment



WRITE FOR YOUR COPY TODAY

CLARAGE V BELT READY UNITS come in 18 sizes—capacities to 12,000 c. f. m. ... the ECONOMY ANSWER to both INDOOR and OUTDOOR air handling requirements.

Use Ready Units and save the expense of building separate motor foundations. Use Ready Units and eliminate alignment problems. Use Ready Units for installations in record time and at lowest cost consistent with quality fan equipment.

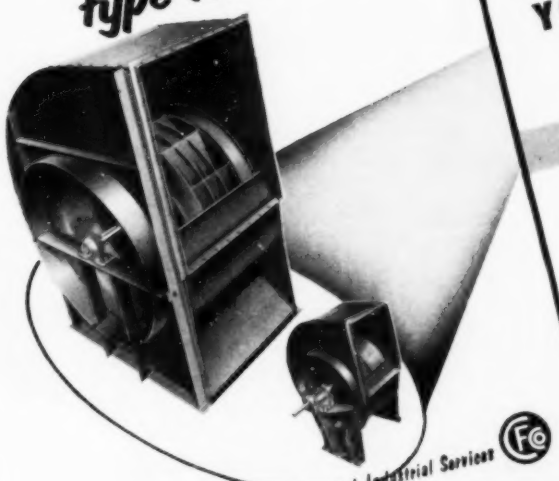
CLARAGE TYPE NH FANS come in 23 sizes—both single and double width—capacities to 200,000 c. f. m. at total pressures up to 6¾".

Use Type NH Fans for ventilation, air conditioning and almost any kind of industrial air handling service....for highly efficient performance throughout a wide operating range.

Type NH Fans are the best, most modern non-overloading fan equipment available. They save in power cost—often make possible the use of smaller, less expensive motors for drive.

You can RELY on both Clarage Ready Units and Type NH Fans for utmost satisfaction, as you have RELIED on other Clarage equipment over the past years.

CLARAGE
type NH fans



for Ventilating, Air Conditioning and Industrial Services

WRITE FOR YOUR COPY TODAY

See...

This Equipment on Display at the Show

YOU ARE CORDIALLY INVITED to inspect this new Clarage equipment at the 11th International Heating & Ventilating Exposition, Chicago, January 26-30. In our booths 1028 and 1030, we will display both Ready Units and Type NH Fans—products of modern design well worth your attention.

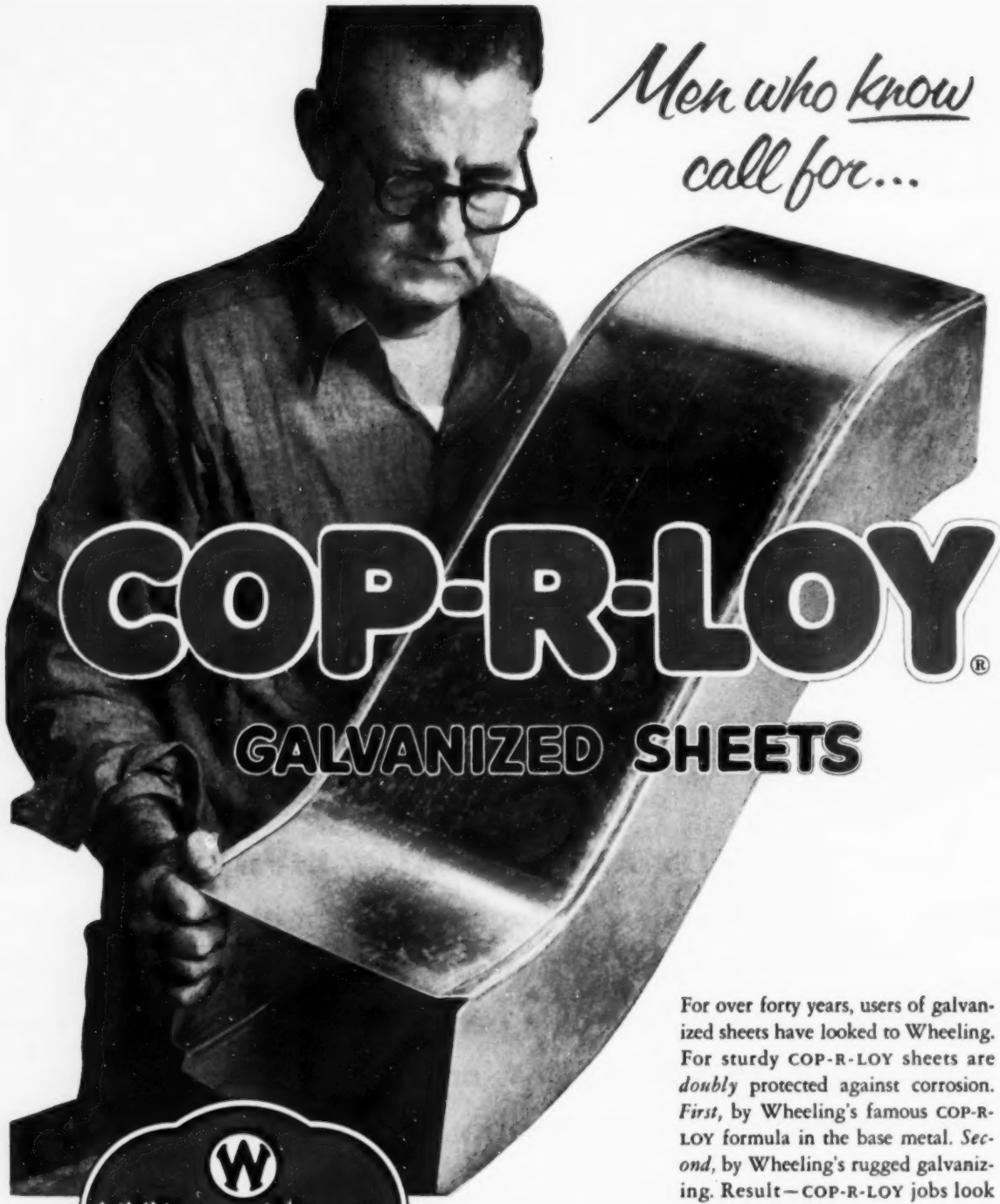
Clarage Fan Company 615 PORTER STREET *KALAMAZOO, MICH.*

You can Rely on...

CLARAGE

Headquarters for Air Handling and Conditioning Equipment

SALES ENGINEERING OFFICES IN ALL PRINCIPAL CITIES • *IN CANADA:* Canada Fans, Ltd., 4285 Richelieu St., Montreal



Men who know call for...

COP-R-LOY®

GALVANIZED SHEETS

For over forty years, users of galvanized sheets have looked to Wheeling. For sturdy COP-R-LOY sheets are *doubly* protected against corrosion. *First,* by Wheeling's famous COP-R-LOY formula in the base metal. *Second,* by Wheeling's rugged galvanizing. Result—COP-R-LOY jobs look better, last longer!

W Wheeling

Steel does it better...COP-R-LOY does it best!

WHEELING CORRUGATING COMPANY • WHEELING, WEST VIRGINIA

ATLANTA BOSTON BUFFALO CHICAGO COLUMBUS DETROIT KANSAS CITY LOUISVILLE
MINNEAPOLIS NEW ORLEANS NEW YORK PHILADELPHIA RICHMOND ST. LOUIS

SONOAIRDUCT®

PAT. APP. FOR

LAMINATED FIBRE DUCT

ACCLAIMED

As an IMPROVED Method

For Installing PERIMETER HEATING LINES

at lower Cost!



EASY TO CUT
EASY TO HANDLE
EASY TO LEVEL
EASY TO STORE

SONOAIRDUCT fits all standard metal bends, elbows, T's and registers.

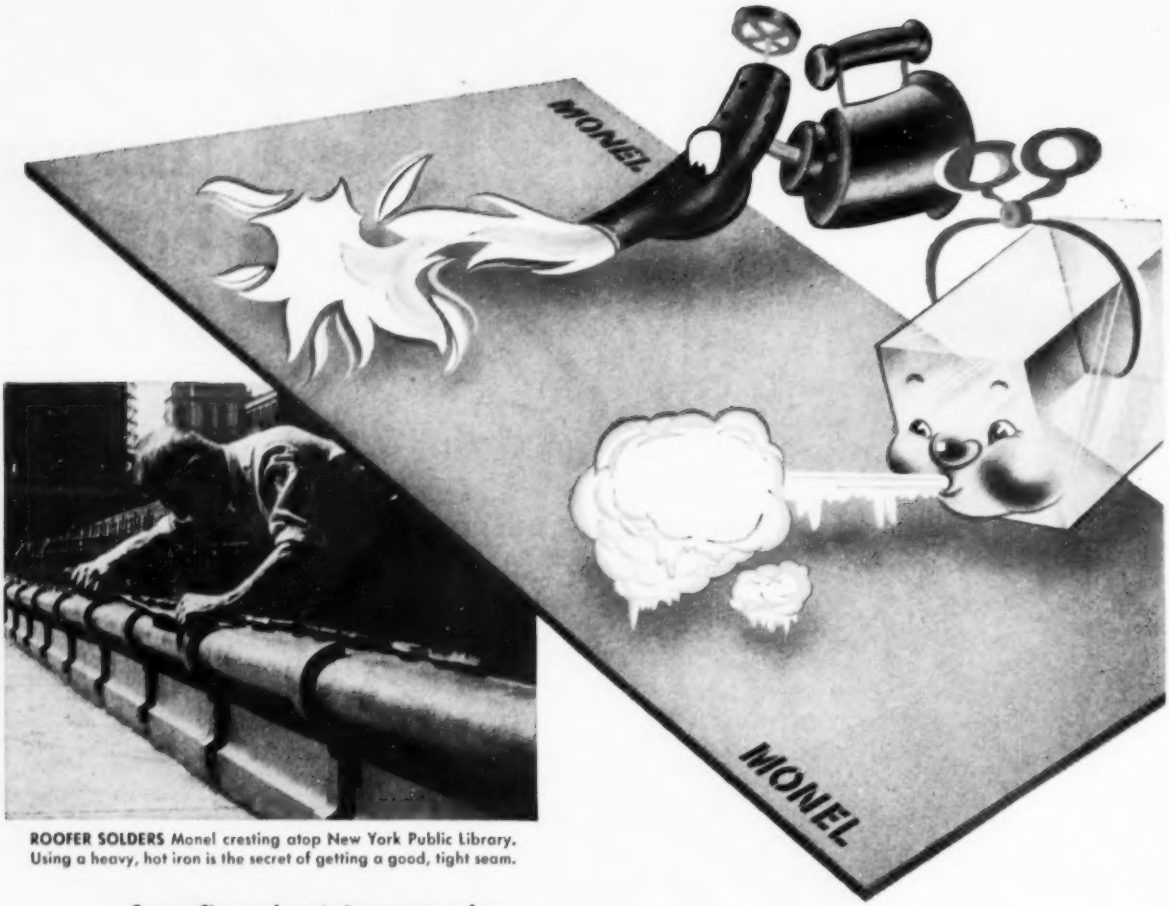
Here is the product that has been hailed by architects and builders, all over the country, as the greatest step forward since the development of perimeter heating systems! Sonoairduct was designed specifically for use as supply or return lines in loop, radial or lateral slab-on-ground perimeter systems—replacing the more expensive, harder-to-handle clay pipe and metal duct! Sizes 2" to 24" I.D., up to 24' long. Saves money on initial cost, plus time and labor savings in installation.

Write for Complete Descriptive Literature and Prices

SONOCO PRODUCTS COMPANY
Construction Products Division
GARWOOD, N. J. — HARTSVILLE, S. C. — MYSTIC, CONN.
LOS ANGELES, CAL. — BRANTFORD, ONT.

sonoco
"Serving the Markets"

DISTRIBUTORS WANTED—*Write for Complete Details*



ROOFER SOLDERS Monel cresting atop New York Public Library. Using a heavy, hot iron is the secret of getting a good, tight seam.

A roofing sheet to remember...

because it stands firm against heat and cold!

Let the weather do its worst! Monel® roofs give your customers the long, trouble-free service they look for.

Because of its low coefficient of expansion, Monel stands firm against strain and flexure. There's less creeping and buckling – and no cracking.

Monel is trouble-free *before* installation, too! The sheets have a special soft temper. They are easily sheared or nibbled. They can be readily handled by brakes and other tools.

With Monel, you do neat soldering by 1) pre-tinning the sheets in your shop and 2) using heavy irons (kept good and *hot!*) for installation. That way, you get strong, tight seams in jig time.

Right now – because the defense program has created so much demand for nickel alloys – the Government has stopped the use of Monel for building purposes.

But there's nothing to stop you from getting information about this quality roofing metal. Write for your free copy of "Monel Roofing Offers Strength, Durability, Long Life," an article which originally appeared in this magazine. You'll find it packed with ideas–and well worth saving until Monel Roofing Sheet again becomes available.

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street, New York 5, N. Y.

INCO TRADE MARK

MONEL ..."*For the Life of the Building*"


DOUBLE YOUR PROFITS
WINTER Heating
. . with SUN OIL or Gas Furnace
plus
SUMMER Cooling
. . with SUN Compressor Cooling Unit
Completely air conditioned homes are easier to sell . . you make a profit both on winter heating and summer cooling. This great new combination makes it possible.
The Series 5000 SUN Furnace is brand new—new compact beauty; one-piece construction; increased efficiency; easier installation; quiet operation; oil or gas fired.
The SUN Cooling Unit is a fit companion to the SUN Hi-Boy—compact, beautiful design; completely enclosed; semi-hermetic unit; readily accessible; inbuilt blower.
See them both at Booth 512-514, 11th International Exposition, or phone, wire or write for complete information and prices.
J. V. PATTEN COMPANY
SYCAMORE, ILLINOIS
Sun
FUELMASTER
Sun
Sun



he Conco-Heat story

is too *big* to tell on one page so we won't try

Instead we're displaying our complete line

for you to see at the International Heating and Ventilating

Exposition Stop at Conco-Heat Booth No. 1229-1231

See today's top warm air line, built for service,

priced for sales, a size and type for every home

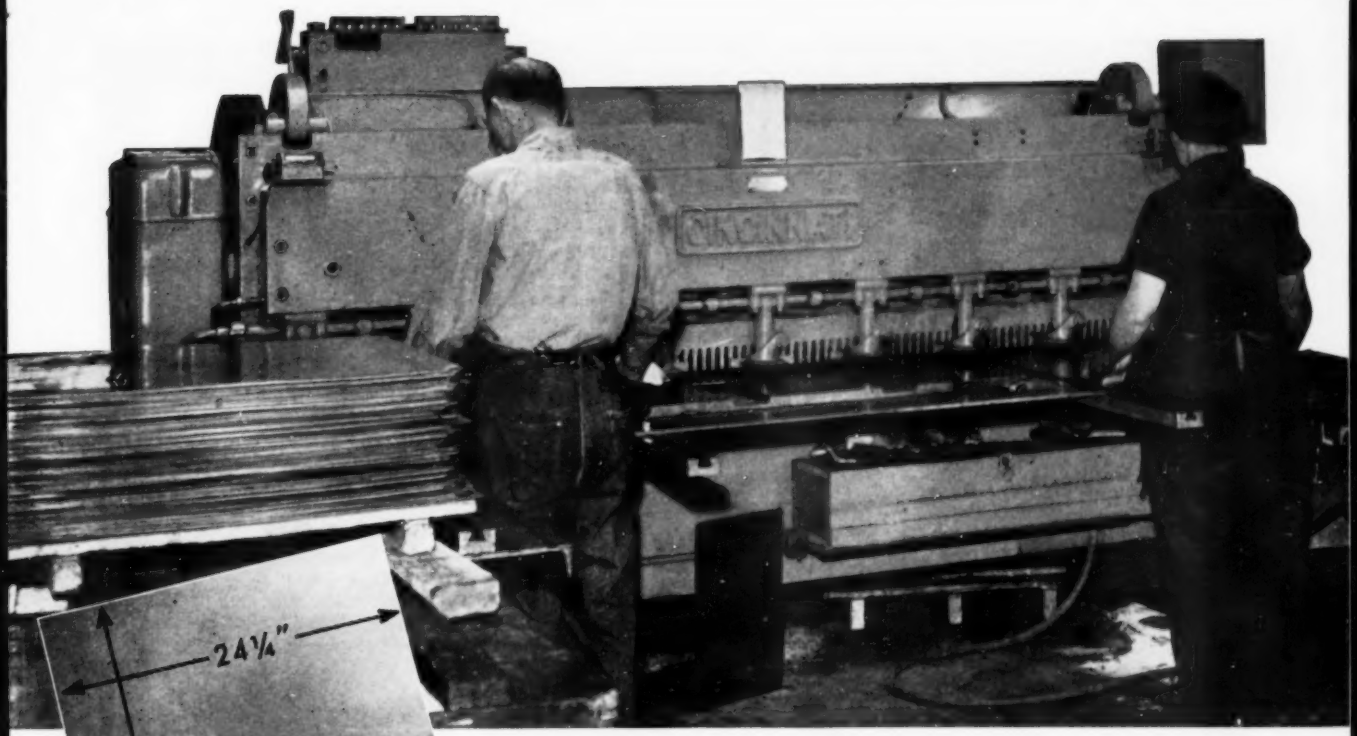
and every heating system

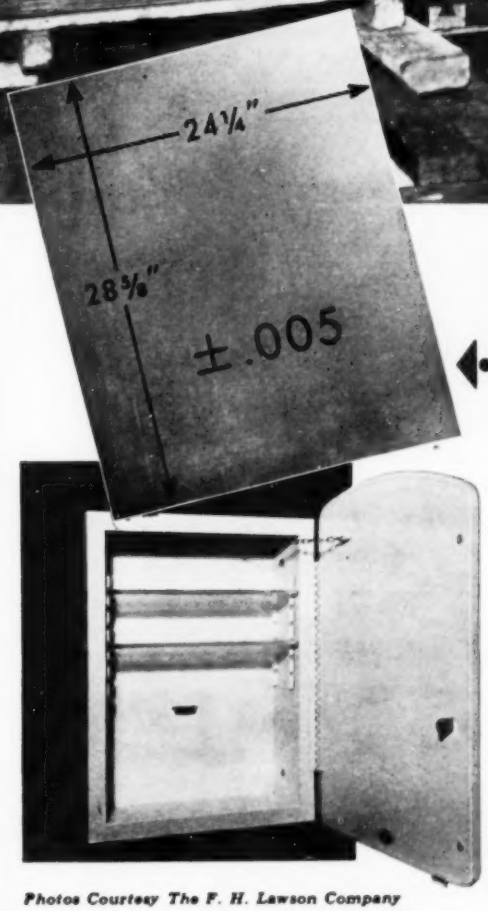
And something *spanking new* will be introduced at this show,

our "4-Seasons" Airconditioner

We'll see you at the show at Conco-Heat

Booth 1229-1231





ALL ALONG THE LINE

←····· this accurate blank

SAVES MONEY!

At 400 an hour, accurate steel blanks, 24¼" x 28⅝", are produced in lots of 10,000 from 26 gauge stock sheets.

Costs are low because of the accurate performance, rapid gauging, ease of control and safety features of Cincinnati All-Steel Shears. One and one-half to two million cuts are made before knives need regrinding—an important factor in the low cost.

The shear is so accurate that all along the production line rejects are very low. Gauging for forming and bending operations is simple and rapid, assembly is smooth, time and money are saved, and a high quality of product is maintained.

Write for your Shear Catalog S-5. Consult our Engineering Department on your shearing problems.

Photos Courtesy The F. H. Lawson Company

These accurate blanks are held to tolerances of ± .005" on Cincinnati Shears in the shops of The F. H. Lawson Company, manufacturers of medicine cabinets, pails and all sorts of containers.

CINCINNATI

THE CINCINNATI SHAPER CO.

CINCINNATI 25, OHIO U.S.A.

SHAPERS SHEARS BRAKES



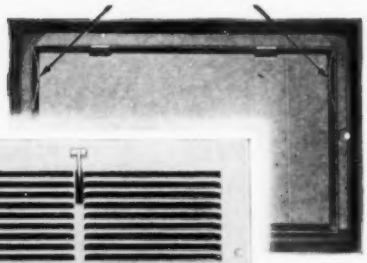
Laundry Chute Doors

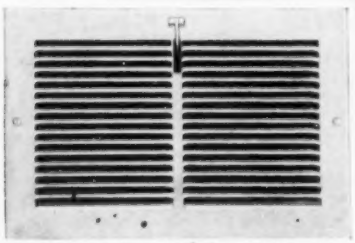
Send For
Catalog
And Prices
Now!



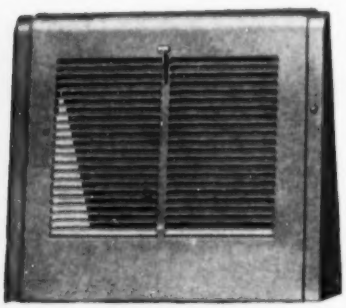
From Top
To Bottom
You Cannot Beat
The A&A Combination
of
Rugged Construction
And
Economy in Price

Two Springs Insure
Smoother, Trouble-free
Valve Operation

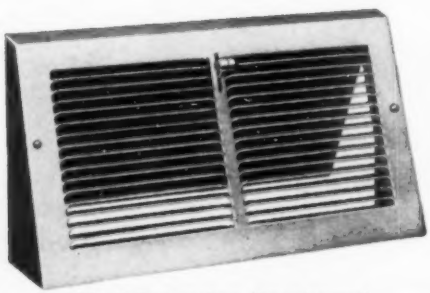




Single Valve Air Conditioning
Registers



One Piece Gravity
Registers



3¾" Extension Baseboard
Registers

THE A & A REGISTER COMPANY
8327 CLINTON RD. CLEVELAND 9, OHIO

YOU JUST NATURALLY MAKE

MORE PROFIT

with installations that *benefit YOU*—

American

JETTRONAIRE

HEATING SYSTEMS

a proven revolutionary method of **FORCED AIR HEATING**

Without adding one extra man or tool to your crew . . . you can install more JETTRONAIRE Heating Units. No tailoring of special parts or pieces. Minimum wall cutting and central cold air return make it easy for you to make more money per job . . . commercial or residential.

OIL & GAS FIRED MODELS

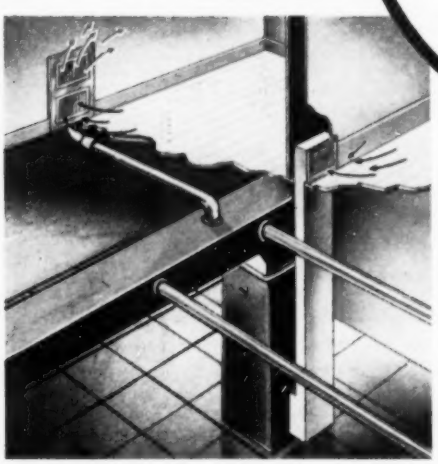
Actual Diameter

OF

JET ORIFICE AT

JETTRONAIRE

PANEL



LOW INVENTORY—FEW PARTS

(1) Sheet Metal (2) Take-off (3) Pipe (4) Elbow (5) Reducer (6) and One-size Jet Panel

Cold air returns centrally located in the living zone act as "breathers" for the JETTRONAIRE Heating System. Jet flow of warm cleaned air makes the first grille in the panel illustrated an air intake by negative pressure. The other grille becomes the outlet, discharging the proper mixture of clean warm air and room temperature air, syphoned from each room. About 65% of this mixture comes from the heating unit, 35% from the room.

- **Simplified engineering.**
- **Simplified installation.**
- **Simplified fittings.**
- **Simplified tools.**
- **Great saving of labor-hours on each installation.**

BENEFIT the *Customer*—

- **More even heating.**
- **Warm floors.**
- **Less stratification.**
- **Less drafts.**
- **Quiet and economical operation.**

BENEFIT the *Builder*—

- **Less cutting required for any installation.**
- **No supply or return lines needed in cement slab construction.**
- **Adaptability to all forms of construction.**

Fully Automatic

For full details, write or phone JETTRONAIRE, INC. 2417 WALNUT STREET McKEESPORT, PA.

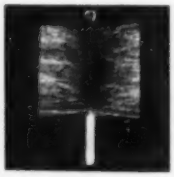
Phone McKeesport-47139 or Phone Phittsburgh-HOmestead 18412

SCHAEFER BRUSHES
—MILWAUKEE—

"BUY SCHAEFER - - - - IT'S SAFER"

Buying ALL your brushes from SCHAEFER, you can be *sure* of one high standard of performance, durability, service, and value. You'll enjoy easier inventory control — and you get the *correct* brush for every need, because of Schaefer's complete line and complete stock.

In Flue and Boiler Brushes — insist on Schaefer's "SILVER BRITE" rustproof spring steel wire, developed for longer wear, more effective cleaning.



SCHAEFER
Rectangular Flue Brushes

No. S-415—2"x4"x4½"
No. S-416—3"x5"x4½"



SCHAEFER
Boiler Brushes

No. S-393—1¾"x4"x5½"
No. S-394—2½"x6"x6½"
No. S-395—3½"x6"x6½"



SCHAEFER
Boiler Brushes

No. S-390—1¾"x4"x4½"
No. S-391—2½"x6"x4½"
No. S-392—3½"x6⅝"x 4½"



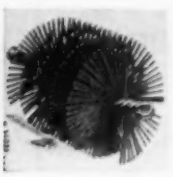
SCHAEFER
Boiler Brushes

No. S-399—2"x4"x6"
No. S-400—2½"x4½"x6"
No. S-401—3"x5"x6"



Single and Double Spiral Flue Brushes

No. S-432—Single Spiral —1" to 4" dia.
No. S-433—Double Spiral —1" to 4" dia.
No. S-434—For small Flues, ½" to 1" dia.



SCHAEFER Round Flue Brushes of Single Spiral, Flat Steel Wire

No. S-430—1" to 4" dia.



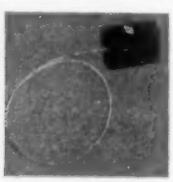
SCHAEFER Rectangular Flue Brushes of Flat Steel Wire—Spiral

No. S-420—2"x3¼"x4"
No. S-425—2¾"x6¾"x7"



SCHAEFER Furnace Brushes of Silver Brite Rustproof Steel

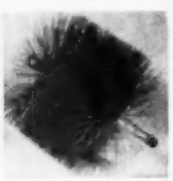
No. S-412—3", 4", 4½", 5" with 5 ft. handle.



SCHAEFER
Fibre Furnace Brushes

Selected Bassine fibre, flexible wire stem, 4", 5", 6" dia., 48" and 60" handle.

No. S-444-445



SCHAEFER Chimney Cleaning Brushes

No. 66—6", 7", 8", 10" and 12" dia. round style of Black Tempered Brush Wire.
No. 666—6", 7", 8", 10" and 12" dia. oblong style of Flat Tempered Steel Wire.



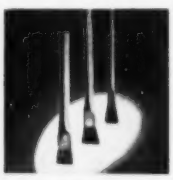
SCHAEFER
Wire Wheel Brushes

Solid Center Type of crimped steel wire.
No. 276—6" dia. x 1⅝" face.
No. 278—8" dia. x 1⅝" face.
No. 280—10" dia. x 2" face.



SCHAEFER
Handy Wire Brush

No. 816—For roughing, soldering etc., 6" long, tempered steel wire trimmed 1½".



Tin Handle Acid or Dope Brushes

Selected grade bristles in tin ferrule. Width, ⅜", ½", ⅝".



T. W. Flat Acid Brushes

Tinners soldering brush, horsehair filling, 1¼" width, 7⅛" overall. Twisted wire handle.



Radiator or Condenser Tube Brushes

Twisted in wire handle, selected hair or bristle. Wide range of sizes.
No. 10—⅝" dia. x 2" brush x 6½" overall.
No. 11—½" dia. x 3" brush x 8½" overall.



SCHAEFER Curved Handle Wire Brushes

No. 810 — Oil tempered steel wire, trimmed 1¼", hardwood block, 14" long. Brush 6", 2, 3 or 4 rows.



Schaefer Copper Tube Fitting Brushes

Clean fittings faster, easier, safer. In 9 sizes for I.D. or Nominal Fitting Sizes from ¼" to 2".



Schaefer Copper Pipe Cleaning Brushes

For Cleaning Outside of tubing. In I.D. Sizes of ⅜", ½", ¾" and 1".



SCHAEFER Vacuum Cleaner Brushes

No. 1005—Bassine Fibre Brush, 10½" dia. tapered to 3" dia. x 6 ft. long—48" handle with threaded nipple at end.

No. 1000—Bassine Fibre Brush, 10½" dia. brush x 10" long. Handle 39" with threaded nipple at end.

Wire Flue Brush and Extension Handles

4 ft. Handles with Nipple and Coupling.
5 ft. Handles with Nipple and Coupling.
6 ft. Handles with Nipple and Coupling.

Write for SCHAEFER Boiler and Flue Furnace Catalog No. 650, or for information on any special brushes you may need.

SCHAEFER BRUSH MFG. CO.

117 W. Walker Street **Milwaukee 4, Wisconsin**

... are "made to order" with

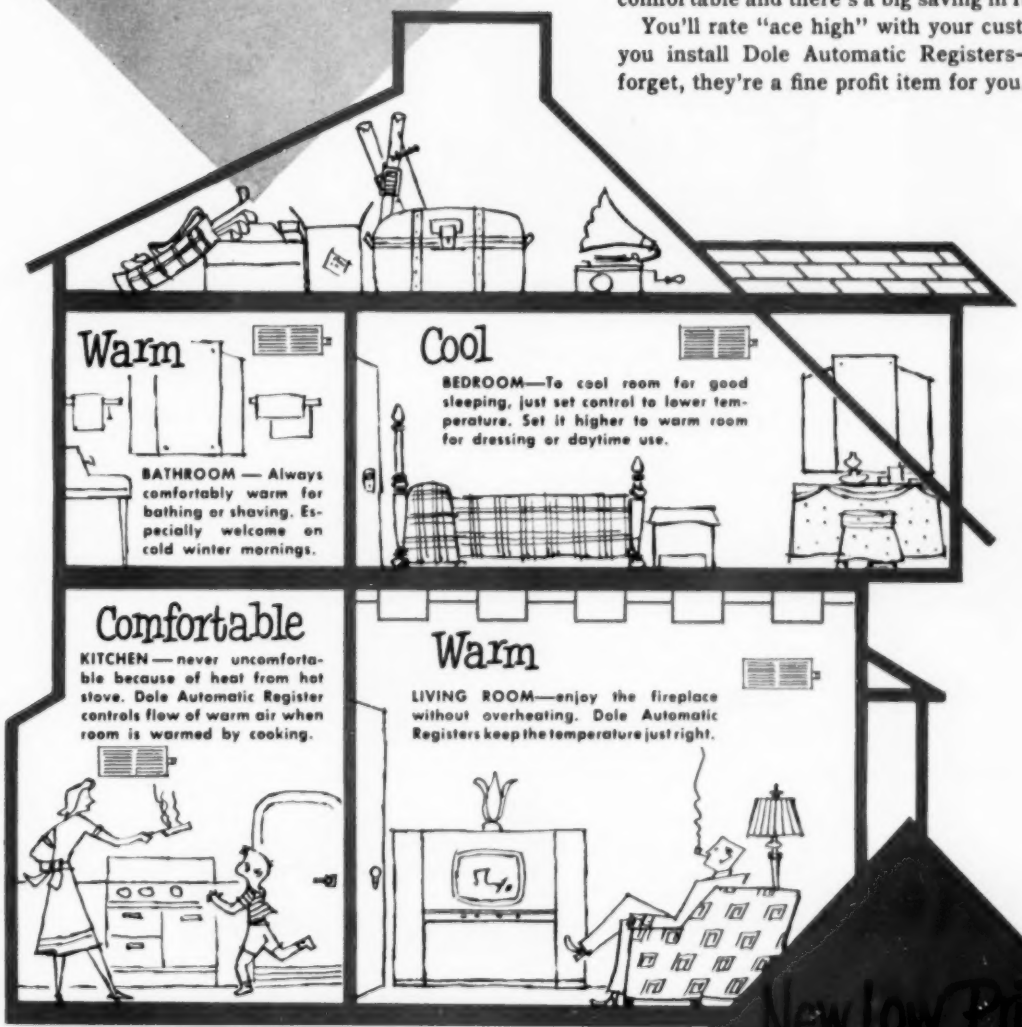
DOLE

AUTOMATIC REGISTERS

Individual Room Temperatures

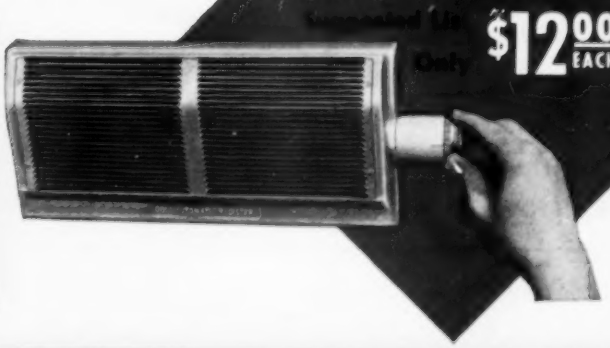
With Dole Automatic Registers, the temperatures of every room in the house can be individually controlled to suit the comfort of the occupant. The entire system is automatically balanced, everyone is comfortable and there's a big saving in fuel bills, too.

You'll rate "ace high" with your customers when you install Dole Automatic Registers—and, don't forget, they're a fine profit item for you.



New Low Price

$12.00 EACH



Control with Dole TRADE MARK

DOLE

THE DOLE VALVE COMPANY
1933 Carroll Ave., Chicago 12, Ill.
Representatives in Principal Cities

PEXTO

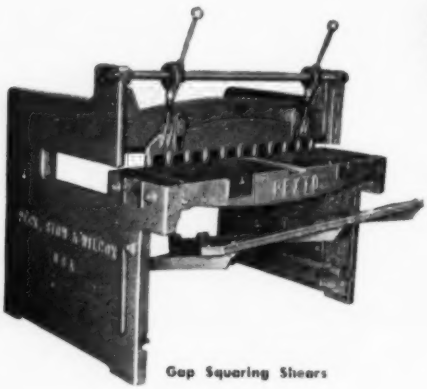
OLDEST NAME IN THE INDUSTRY

SHEET METAL WORKING EQUIPMENT FOR EVERY JOB

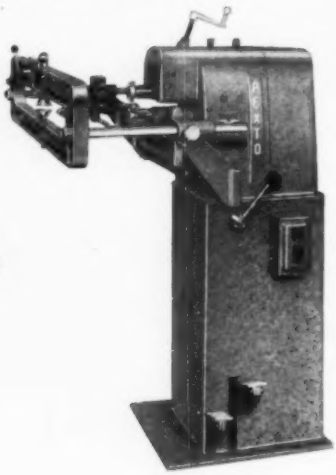
SOME OF THE MANY MACHINES AND TOOLS IN THE COMPLETE PEXTO LINE



Rotary
Slitting Shears



Gap Squaring Shears



Combination
Rotary Machines



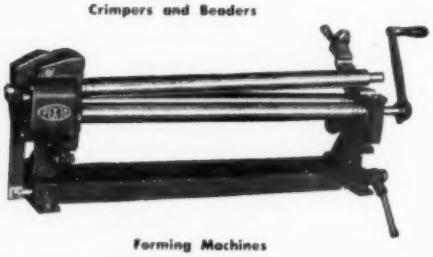
Furnace Collar Edging Machines



Crimpers and Beaders



Bar Folders



Forming Machines



Double Cutting Shears



Handy Seamers

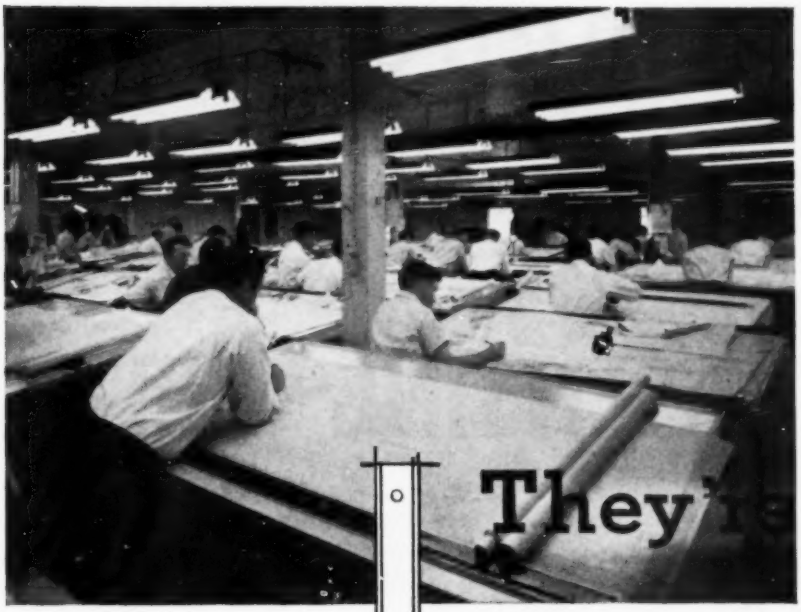


Bull Dog Snips

WRITE FOR CATALOGS

THE PECK, STOW & WILCOX COMPANY ● Since 1785 ● **SOUTHINGTON, CONNECTICUT, U. S. A.**

IPx53



They're ready to work for you

The Jackson & Church engineering team is ready to solve *any* problem involving the use of *any* Jackson & Church equipment.

For any J-C product, for the most difficult or unique installation problems, call on the Jackson & Church engineering department for plans and practical advice.

The competent specialists in our engineering department will aid in your planning to insure your continued satisfaction with Jackson & Church equipment.

Manufacturers of J-C warm air heating equipment, pulp processing equipment, pre-plasticizing plastic molding presses, and concrete block and brick machines.

J-C

JACKSON & CHURCH CO. SAGINAW, MICHIGAN

Work well done since eighty-one

SLIT CORRUGATED

Metal 100 ft. per Minute

with the inexpensive heavy duty

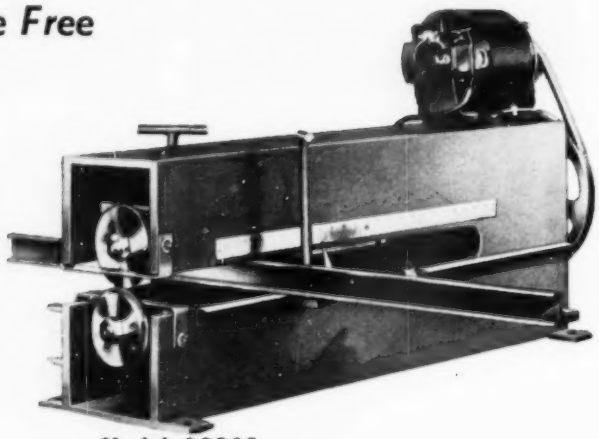
WILDER *PORTABLE* SLITTING SHEAR

Sensational Performance • Trouble Free

Model 1824C cuts corrugated iron up to 18 gage sideways or endways 100 ft. per minute

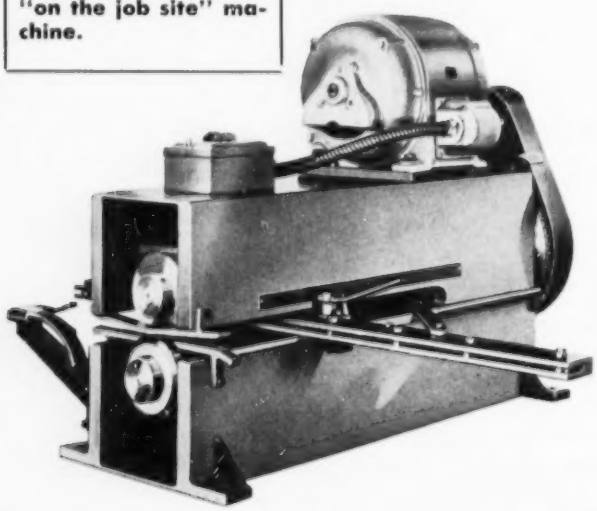
2 SIMPLE ATTACHMENTS

Convert 1824C instantly into flat sheet shear



Model 1824C

The rugged new Model 1024 cuts 72 ft. per minute up to 10 gage, and is still an "on the job site" machine.



All Wilder Slitting Sheets are trouble free even to the inexperienced operator, and take the place of the large power squaring shear with substantial savings in initial cost, floor space and "on the job site" portability.

For complete information ask your jobber, or write Sales Office, P.O. Box 1925, Carmel, Calif.

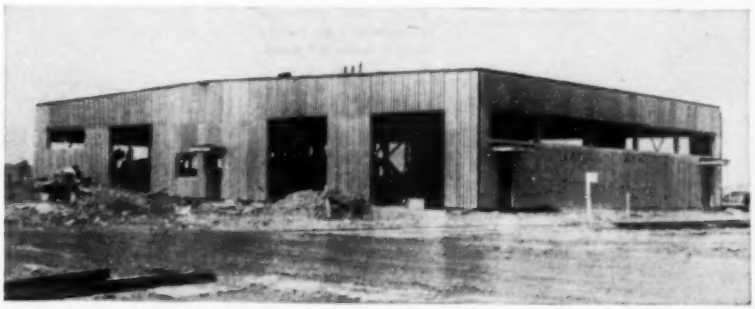
SPECIFICATIONS	2024	1624	1024	1824C
Cutting Capacity—Mild Steel	20 Ga.	16 Ga.	10 Ga.	18 Ga.
Cutting Speed	100 FPM	100 FPM	72.5 FPM	100 FPM
Minimum Cut	1½"	1½"	1½"	1½"
Maximum Cut	24¼"	24¼"	24¼"	24¼"
Horsepower	1/3	¾	2	½
Voltage	110 Single Phase	110-220 Single Phase	220-440 3 Phase	110 Single Phase
Approx. Shipping Weight	220 lbs.	405 lbs.	1200 lbs.	320 lbs.

WILDER

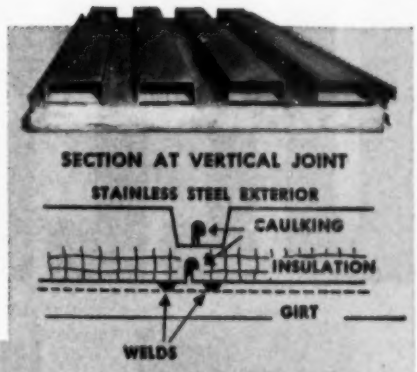
MANUFACTURING CO. INC.

Insulated panels of U·S·S 17 (Type 430) Stainless Steel mean fast, low-cost construction at Fairless Works

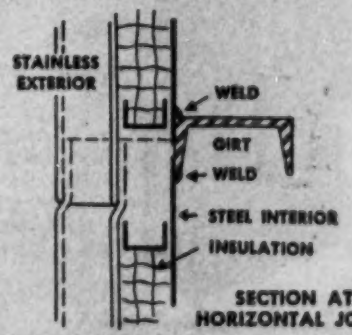
4005 sq. ft. of panels installed by crew of 4 in 8 working days



WORKING UNDER ADVERSE WEATHER CONDITIONS, a crew of four installed 4005 square feet of insulated Stainless Steel panels on this building in less than eight working days. Panels were manufactured by H. H. Robertson Co., Pittsburgh, Pa.; installed by R. A. Steelman Co., Trenton, N. J.; architects, Walter Kidde Constructors, Inc., New York.



THESE DETAILS of panel cross sections show methods of making horizontal joint (below) and vertical joint (above). Such methods of joining, combined with the low "U" factor designed into these panels, produce an exceptionally well insulated building.



CONSTRUCTION with insulated building panels of U·S·S 17 (Type 430) Stainless Steel is gaining considerable momentum in the field of industrial building—such as power plants, factory office buildings, warehouses, etc. Architects and owners alike have been quick to recognize the advantages of light panel weight, long building life, minimum maintenance, low labor costs and fast erection in any type of weather.

The building shown here is a Stainless-paneled fire station at the new Fairless Works of United States Steel Corporation at Morrisville, Pa. The 66′ x 100′ structure contains 4005 square feet of insulated panels of 20 gage U·S·S 17 Stainless Steel.

A crew of four men erected the panels under adverse weather conditions in less than eight working days. The prefabricated sandwich panels, consisting of U·S·S 17 (Type 430) Stainless Steel exterior, $1\frac{1}{2}$″ of insulation and a coated steel sheet interior, were attached to the structural steel framework by spot welding, a fast and strong method of installation. U·S·S 17 (Type 430) is readily available without CMP tickets.

Note the cross-sectional sketches of the horizontal and vertical joints. As indicated in the sketches, caulking is applied to the vertical joints prior to erection. This provides an excellent vapor seal and is therefore instrumental in reducing the over-all "U" factor. The cross section of the vertical joint illustrates how the lower panel is counter sunk to gain a tight flush joint at the lap.

A new book containing the latest information on construction with panels of U·S·S 17 Stainless Steel is now being distributed. For your copy, use the coupon.

United States Steel Corporation
525 William Penn Place, Room 2808-B
Pittsburgh 30, Pa.

Please send me your new booklet on U·S·S 17 Stainless Steel for industrial buildings.

Name.....Title.....

Address.....

City.....State.....

United States Steel produces only the Stainless Steel sheet and strip from which panels of this type are made; the panels themselves are fabricated by a number of our customers.

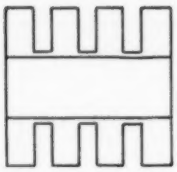
UNITED STATES STEEL CORPORATION, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
NATIONAL TUBE DIVISION, PITTSBURGH • TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

U·S·S STAINLESS STEEL

USS

SHEETS · STRIP · PLATES · BARS · BILLETS · PIPE · TUBES · WIRE · SPECIAL SECTIONS

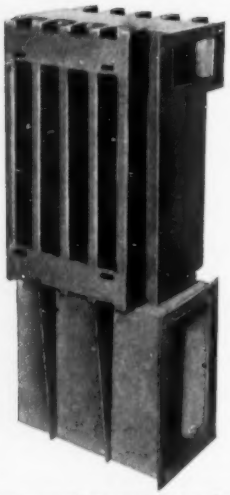
UNITED STATES STEEL



The schematic diagram shows how the exclusive Hallmark Deep Corrugated heat exchanger presents far more heating surface to the hot gases.

DEEP CORRUGATION

in the Hallmark heat exchangers gives more heat per unit of fuel!



Note that corrugations on gas heat exchanger above are narrower to get the most efficient heat transfer by convection, since a gas flame delivers little radiant heat.



Note that corrugations are wider on oil-fired model to get most efficient heat transfer by BOTH convection and radiation.

In the Hallmark, the combustion gases are divided into eight columns, with a great area of heating surface around each area of gas. Because the gases still flow in a normal, unimpeded manner, there is less danger of the pulsation and noise found in many conventional furnaces. Because this unique exchanger presents more heating surface, the furnace operates at a lower stack temperature with greater fuel economy.

THERE IS A HALLMARK FURNACE FOR EVERY HEATING REQUIREMENT!

Highboy, Counterflow, and horizontal Oil-fired Furnaces with 65000, 85000 and 125000 BTU output.

Lowboy Oil-fired Furnaces with 70000, 90000, 110000, 130000 and 150000 BTU output.

Highboy Gas-fired Furnaces with 70000 and 95000 BTU output.

Counterflow Gas-fired Furnace with 95000 BTU output.

- *All Hallmark furnaces shipped fully assembled, factory tested, and ready to install.*
- *All heat exchangers 14 ga. except gas furnaces shipped into S.U.R. areas.*
- *Modern styled jackets insulated with Fiberglass and aluminum. Baked grey crackle finish.*
- *All motors powerful enough to drive air through 4" ducts as recommended on modern heating systems.*

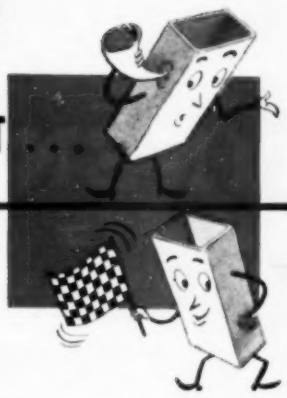
WRITE FOR ILLUSTRATED FOLDER SHOWING ALL MODELS.

Hallmark
PRODUCTS COMPANY

1014
N. CHARLES ST.
BALTIMORE
MARYLAND

Carey duct

ALL-ASBESTOS AIR DUCT . . . QUIETS air movement . . . speeds up installation

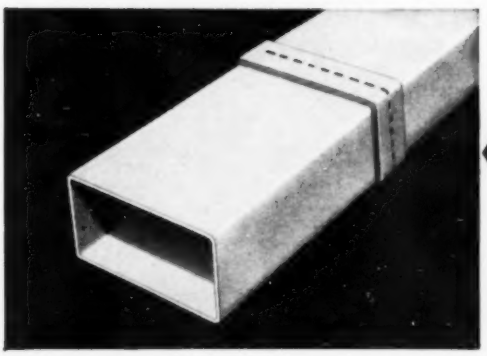


Carey duct

CONSERVES CRITICAL METAL, TIME AND LABOR COSTS ...POSSESSES REVOLUTIONARY NEW ADVANTAGES!

Asbestos from core to cover, Careyduct is the *leading* choice of *leading* architects and builders because it offers a combination of advantages found in *no* other duct. It's light in weight, yet strong and rigid . . . low in cost, yet high in efficiency . . . goes up easily and fast, saves time and cuts cost!

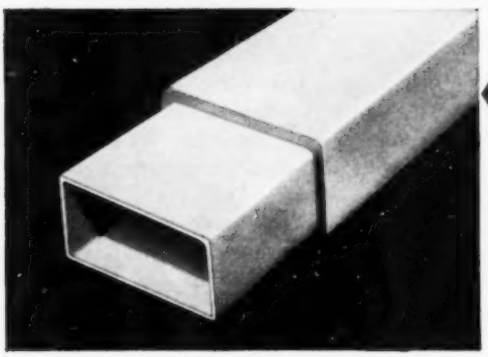
Careyduct is approved by Underwriters' Laboratories; cannot rot, rust or burn; is job-proved on important installations from coast to coast. Order it in standardized prefabricated sections for slip-joint assembly in *two* all-purpose forms!



1 Single Wall Careyduct

FOR WARM AIR HEATING SYSTEMS

"SW" Careyduct hushes pops, groans and creaks that "telegraph" through ordinary metal ducts during furnace "on" and "off" periods. Its insulating properties conserve fuel, speed furnace-to-room heat up time. "SW" Careyduct is also ideal for cold air returns and ventilating conduits. The 3′ prefabricated sections are joined by a collar, similar in texture and thickness to the duct itself.



2 Insulated and Acoustical Careyduct

FOR AIR CONDITIONING SYSTEMS

"I&A" Careyduct "soaks up" sound . . . hushes air noise . . . absorbs fan *rumbles* and *grumbles* . . . makes possible whisper-quiet air conditioning systems in new buildings or old. "I&A" Careyduct handles air velocities up to 2500 feet per minute; permits installation of smaller ducts where space is limited. The 3′ sections are designed for rapid, trouble-free installation with ordinary tools.

*Under Union jurisdiction, Careyduct is installed by the Sheet Metal Trades.

Both types of Careyduct come in a range of sizes from 2½" x 5½" to 23½" x 23½" in width, and in special sizes up to 17½" x 35½". Also in round sections from 3" to 30" in diameter. And in a complete range of standard fitting accessories.

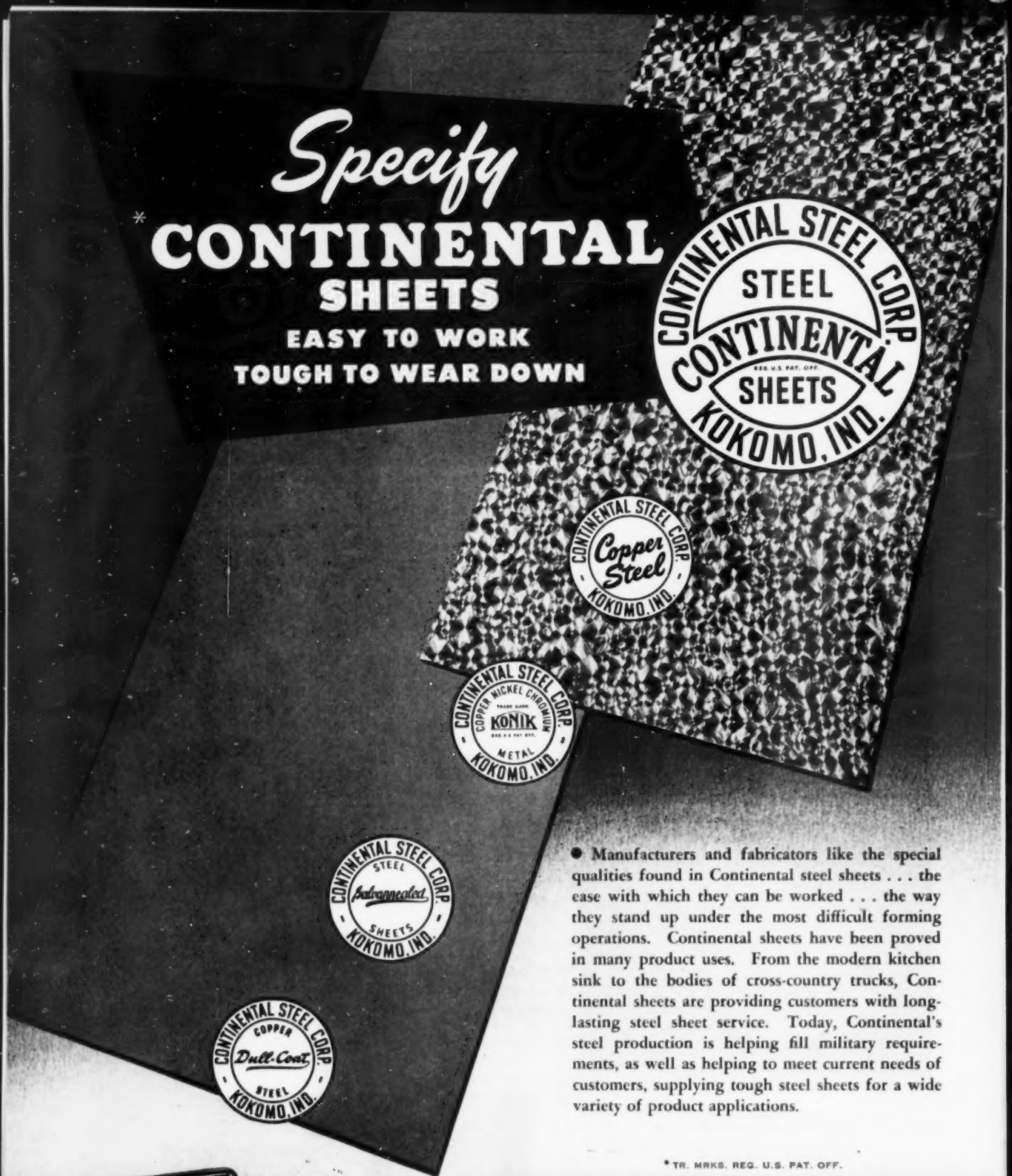
Get the full story! Learn how you can save metal, time and manpower . . . improve your profit picture, too! Phone your Carey representative, or send for your free copy of our new Careyduct Manual. No obligation!



Carey

The Philip Carey Mfg. Co., Lockland, Cincinnati 15, Ohio

See us at the Plant Maintenance Show, Cleveland, Jan. 19-22, Booth 1601



● Manufacturers and fabricators like the special qualities found in Continental steel sheets . . . the ease with which they can be worked . . . the way they stand up under the most difficult forming operations. Continental sheets have been proved in many product uses. From the modern kitchen sink to the bodies of cross-country trucks, Continental sheets are providing customers with long-lasting steel sheet service. Today, Continental's steel production is helping fill military requirements, as well as helping to meet current needs of customers, supplying tough steel sheets for a wide variety of product applications.

* TR. MRKS. REG. U.S. PAT. OFF.



CONTINENTAL STEEL CORPORATION

GENERAL OFFICES • KOKOMO, INDIANA

PRODUCERS OF *Steel Sheets*, including: Continental GALVANIZED, KONIK and COPPER-STEEL culvert sheets.

COPPER-STEEL Galvanized, KONIK steel sheets Galvanized, DULL COAT, Continental GALVANNEALED, ELECTRICAL, Hot Rolled Pickled.

ALSO, Manufacturer's Wire in many sizes, shapes, tempers, and finishes, Continental Chain Link Fence, Nails, and other steel products.

Here's Your Directory of Quality Soldering Supplies



ALLEN SPECIAL
STAINLESS STEEL SODERING FLUX
(Item 5)

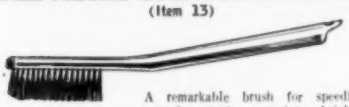
Here's a remarkable, fast flux that makes the sodering of stainless steel as easy as sodering tin plate. (Also available in a special odorless formula where less strength is required). "ALL-SOL" works with all soders but for best results use **Allen** stainless steel soder. Pints, gallons.



ALLEN SODERING SALTS
(Item 1)

An all around flux in convenient powder form; just add water 3 to 5 times according to metal to be sodered. Soders all metals but aluminum. Takes a quick bite and makes the soder hold on. Non-acid. Comes packed in metal or glass as preferred. ½ lb., 1 lb., 5 lb. sizes.

ALLEN ALL-METAL SCRATCH BRUSHES
(Item 13)



A remarkable brush for speedily removing rust, corrosion, brightening metal. Brush is all metal, hence can be used under torch flame, etc. Brush can be cut off at end, thus renewing life as front end wears down. Bristles of tough, strong steel. Three brushes like illustration. Also one all metal brush, "straight-construction" for battery work, etc. Large, medium and small sizes.



ALLEN SODERING OIL
(Item 4)

A highly technical, concentrated sodering compound officially endorsed by the National Underwriters.

Causes neither verdigris nor corrosion. Gets into the tiniest crevice and takes the soder along with it. Makes perfect electrical and mechanical joints. For hand or machine sodering. Excellent for sweat sodering copper pipe joints. 1 lb., 3 lb., and 12 lb. sizes.

ALLEN SOLID SAL AMMONIAC
(Item 11)



Speedily cleans and brightens the sodering copper. Outlives throus lump many times.

Six sided, solid, convenient. Does not crumble, nor corrode metal work, nor tools on the job.



ALLEN Galvanized Iron SODERING ACID
(Item 7)
(Formula G. I.)

An active sodering acid for galvanized and hard-to-soder metals: and old metal that has been exposed to the weather. Works well on monel metal (white label shipping regulations). Quarts and gallons.

Note: For "all-a-round" sodering on new and fairly clean work use **Allen** Sodering Liquid (see No. 6 below).

ALLEN ALUMINUM SODER
(Item 18)

Allen Alumi-Soder is a complete soder and flux combined. Requires only heat to permanently join aluminum to itself or other metals. Comes in ⅛" square wire form and triangular ¼ lb. and 1 lb. bars. Also in popular trial size pieces, called test pieces, ¼ lb. and 1" bar and wire form.

Also soders cast-iron.



ALLEN SUPERTITE ACID SWABS
(Item 12)



Deep set bristles of good quality held tightly in heavy gauge holder; securely crimped, no jagged edges or rough metal exposed. No. 2 and No. 1 sizes.



ALLEN SODERING LIQUID
(Item 6)

Standard Formula. For all-a-round work, for all metals save aluminum and stainless steel.

17,000 pounds to the square inch with no gumming, fumes, or corrosion. Double strength, non-evaporating. Works like Lightning. Adaptable to hand or machine sodering. Excellent for tinning the sodering copper. 2 oz., 4 oz., quarts and gallons.

ALLEN SODERING PASTE
(Item 2)



Standard Formula. Safest sodering paste made—fast working—a convenient corrosion-free, soft form of flux. Adheres to the surface while you soder. Assures secure electrical and mechanical joints. Saves time. Triples strength of the soder. Makes soder self-fluxing. Official National Underwriters Laboratory approved listing. 2, 4, 8, 16 oz.

ALLEN EZY-FLO Torch Formula Sodering Paste
(Item 2-A)



A special sodering paste for torch and "sweat joint" sodering. Also works well with the sodering iron. Comes in same sizes and at same prices as "Standard Formula," 2, 4, 8, 16 oz.



SILVER SODER
WIRE AND RIBBON FORM
(Item 10)

Wire form for all around work. Excellent tensile strength, high vibration and corrosion resistance. Gives rigid, good color joint.

Ribbon form same specifications as wire. (For band saw **Wire Form** work.)

FLUX FOR SILVER SODER
(Item 15-A)

Provides quick, smooth flow giving deep sound silver soder penetration on most metals including stainless steel. 1 lb. and 5 lb. sizes.



Send Your Letterhead!

Tell us what samples you want and what metals you soder — We will include with the samples no charge our new Jr. size *all metal* scratch brush.

FREE INTRODUCTORY OFFER

Check Samples Here (Attach to your letterhead or list some on your letterhead)

Item	
☐ 1	Sodering Salts
☐ 2	Sodering Paste
☐ 2A	Ezy-flo Torch Formula Sodering Paste
☐ 4	Sodering Oil
☐ 5	Stainless Steel Sodering Flux
☐ 6	Sodering Liquid
☐ 7	Galvanized Iron Sodering Acid
☐ 11	Solid Sal Ammoniac
☐ 12	Supertite Acid Swabs
☐ 13	All-Metal Scratch Brushes
☐ 15	Silver Soder—Wire and Ribbon Form
☐ 15A	Flux for Silver Soder
☐ 18	Aluminum Soder

L. B. ALLEN CO., Inc.
6702 Bryn Mawr Ave., Chicago, 31, Ill.

EQUIPMENT DEVELOPMENTS

The latest information on manufacturers' developments is presented here with brief summaries of the applications of these products. For new literature giving product information which is available see page 280.

Gas Conversion Burners

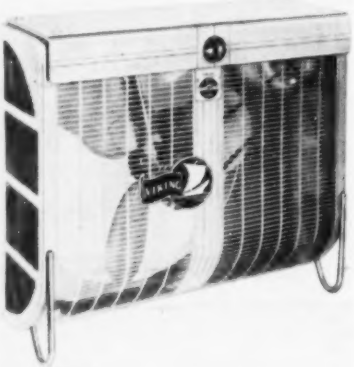
MONCRIEF GAS conversion burner in three sizes, with ratings of 50,000 to 300,000 Btu — The Henry Furnace Co., Medina, Ohio. It extends only a few inches outside the furnace or boiler. The burner head and mixer tube are constructed of cast iron, and connecting parts are of



stainless steel. The burner is independent of outside electrical supply, with self-energizing controls and pilot burner generating all the energy needed. All controls are accessible when the duct cover, located outside the furnace or boiler, is removed. AA 1

Window Fan

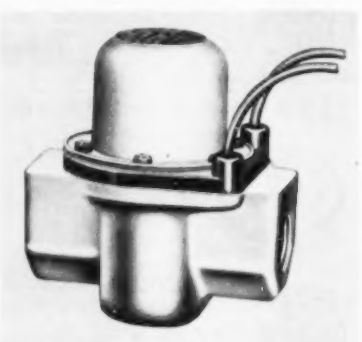
COMPLETELY REDESIGNED 911 window fan with two new features: an automatic timer which adjusts operation from one to 12 hours (optional equipment) and a two-speed control which permits either rapid or slow cooling action, adjustable to outside conditions and to personal preferences — Viking Air Conditioning Corp., Cleveland. The unit has been restyled, and the motor has been painted to harmonize with the cover and placed so that it is almost invisible, the company states. The motor is 1/6 hp, 110 volt, 60 cycle, single phase and the entire fan unit is 28½ in. wide × 24⅝ in. high × 11 in. deep. It is designed to fit all double hung windows from 24 to



42 in. The fan is attached to the window with brackets secured to the frame by thumb screws which fit into rubber grommets, intended to assure quite operation. AA 2

Direct-Acting Gas Valve

SERIES 925-926 direct acting gas valves for opening and closing the gas supply line at the demand of the room thermostat, limit control, or other controlling device—Penn Controls, Inc., Goshen, Ind. They are



intended for use on all gas appliances including central heating, floor furnaces, etc. All models are designed for ½ lb pressure and may be used on natural, manufactured, mixed and LP gases. Units are available without conduit cover (Model 925) or with it (Model 926). Four sizes range from ¼ to ¾ in. AA 3

Ignition Transformers

TYPE U and Type CU ignition transformers designed for adaptability and accessibility—Webster Electric Co., Racine. Large full junction boxes are located either directly on top (Type U) or at one top corner. Since the new models use all of the



company's standard bases, they can be used to replace any of its transformers now in use. The new models are furnished for 115 volt, 60 cycle primary and 10,000 volt secondary current. AA 4

Gas-Fired Indoor Incinerator

GAS-FIRED INDOOR INCINERATOR for home use, which burns both wet and dry garbage and trash-burner waste — The Majestic Co., Inc., Huntington, Ind. The vent pipe taps into the furnace flue without affecting furnace efficiency, the manufacturer states. A casing completely surrounds an inner shell in which the actual burning takes place. By a special arrangement of baffles, air that enters the bottom of the unit rises between the outer and inner casings. A controlled amount enters the incinerator at the top, drying the

charge between firings and affording oxygen for combustion during firing. This downdraft action is designed to prevent odors or smoke from escaping into the room.

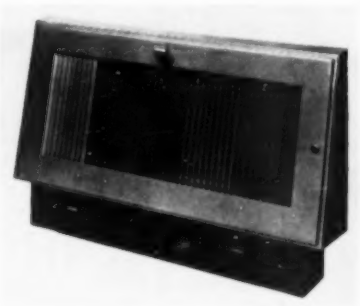
Some of the air, instead of going through the firing chamber, flows



directly to the vent pipe, carrying with it excess heat from the unit and preventing the outer casing from becoming too hot. The hotter the fire, the more the cooling air pours through the double walls. Three models are offered—automatic gas fired, gas fired, and fuel-less. AA 5

Base Diffuser for Small Pipe Systems

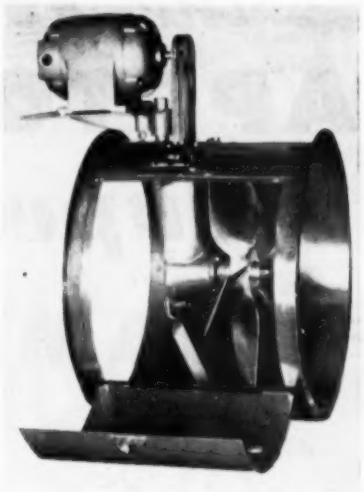
No. 132¼ base diffuser for 4, 4½ and 5 in. small pipe systems — United States Register Co., Battle Creek, Mich. The unit's vertical diffuser grille bars are set at graduated angles to spread the air flow. Rubber sealing gaskets are furnished to prevent leakage and wall discoloration. The unit sets against the wall, and the air stream does not come up



underneath or behind curtains and drapes. The model rests on the finished floor, and is installed without requiring cutting of carpets. The head extends ¼ in. beyond the baseboard and quarter round, and the base extension of the register covers the fitted carpet around the register head. The diffuser is available with or without head. AA 6

Door Exhaust Fan

DUCT-MOUNTED door exhaust fan for exhaust systems in a range of sizes from 12 to 48 in. diameter, for removal of 900 through 38,000 cfm. —M & E Mfg. Co., Indianapolis. Features include heavy cast aluminum blades, vaportight belt drive enclosure, and sealed ball bearings. Any desired fan speed may be obtained. The unit has a side access



door to facilitate periodic inspection and maintenance. AA 7

Oil Furnace

REVERSE-FLOW oil furnace suited to basementless houses with underfloor duct heating systems — XXth Century Heating & Ventilating Co., Akron. The Zeph-Air reverse flow is designed to eliminate overhead heating ducts and to permit a larger, neater working and living space. The furnace is automatic, has all-cast construction and can be converted to gas with no major alterations, the manufacturer states. Btu input is 138,000 and output is 110,000. AA 8

(Please turn to Page 266)

This coupon is for your convenience in obtaining more information about any of the equipment mentioned in this issue.

FOR YOUR CONVENIENCE 1-53

American Artisan
6 N. Michigan Ave., Chicago 2, Ill.

Please ask the manufacturers to send me full particulars about the equipment mentioned under the following reference numbers in Equipment Developments

(Circle each number in which you are interested)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33							

Name ..... Title .....

Company .....

Address .....

City ..... Zone ..... State .....

the NEW...

APPTON "*super seven*" HAMMER

a **GIANT** *in power and*
a **DWARF** *in size*



for efficient

- sealing of
  PITTSBURG LOCK SEAMS
- fabrication of
  SHEET METAL, BOTH AT SHOP
  AND ON LOCATION
- erection of
  FABRICATED PARTS

Fifty years experience in design and production of pneumatic tools has resulted in our New "Super Seven." This tool eliminates much operator fatigue, with a subsequent savings in time and cost.

Wholesaler Inquiries Invited

AMERICAN PNEUMATIC TOOL COMPANY
ALLENDALE, NEW JERSEY



47 FURNACES IN THE ARMSTRONG LINE

and NO inventory problem

With the Armstrong line of furnaces at your command you never have to hesitate or substitute or try to talk a prospect out of what he wants and should have.

Your inventory shows ***47 different furnaces***, yet your inventory cost is zero. That's because your nearby Armstrong wholesaler carries a complete stock for you. No back-breaking cost; no sales lost because of cross-country shipment delays.

A tremendous line, and a mighty **good** line, built ***and*** merchandised to cut out the things which cut your profits.

Sales power, too. Armstrong furnaces are backed by national advertising, and sales help for you such as direct-mail, store displays, stuffers, bulletins and so on.

A complete profit-package! Ask your Armstrong wholesaler; if you don't know him, write us for his name.

The Armstrong line includes a full range of models fired by oil, gas and coal — gravity and "Indoor Sunshine" winter air-conditioning units. In the oil-fired line are models for basement installation, hi-boys, counterflows and horizontals, delivering from 80,000 to 200,000 BTU, and oil burners with capacities from ¾ GPH up. Armstrong gas furnaces also include counterflows, hi-boys, horizontals and basement models, with inputs from 60,000 to 210,000 BTU. There are excellent Armstrong conversion burners for all gases, and special burners to convert any Armstrong oil furnace to gas with minimum installation cost and maximum efficiency. Most Armstrong gas furnaces are available with the Armstrong Dual-Fuel burner (natural to LP gas). The Armstrong coal-fired line includes "Indoor Sunshine" winter air-conditioning models, gravity and pipeless furnaces, and special heavy duty models. Sizes range from 20" to 38". Regardless of the type home which is preferred in your territory, or the fuel preference, with Armstrong you can match the need . . . perfectly . . . *profitably!*



Wherever you are

YOU'RE ON THE ARMSTRONG MAP . . . *IN A STRATEGIC LOCATION*

Armstrong's two huge plants serve both sides of the continent quickly, economically. A warehousing distributor, with a complete Armstrong inventory, is within a stone's throw of everywhere. Wherever you are, Armstrong's distribution system is set up to serve you. It's better, quicker, more profitable . . . for you.

Please address Dept. AA at our plant nearest you.

ARMSTRONG FURNACE COMPANY

COLUMBUS, OHIO — **DES MOINES, IOWA**

Warm-Air Furnaces—Gas, Oil, Coal—A Complete Line

SCHNACKE Designed These HOME AIR CONDITIONERS with the Heating Contractor in Mind.

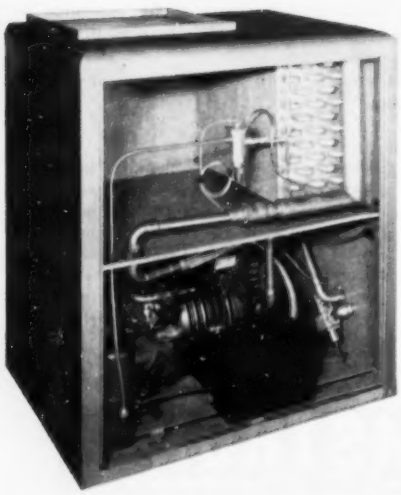
Complete

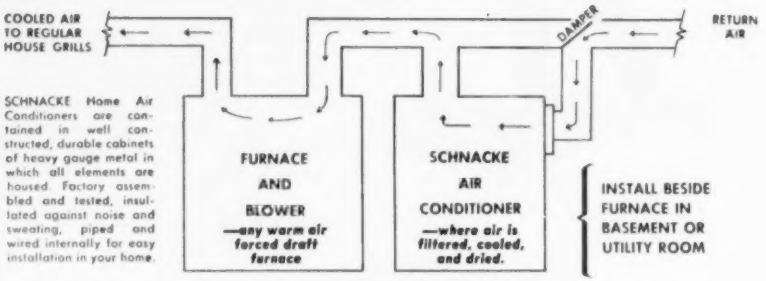
HOME AIR CONDITIONERS to be connected with existing warm air heating systems . . . at a price your customers can well afford!

SCHNACKE leadership in industrial and commercial air conditioning — all over the world — now presents these advance engineered HOME Air Conditioners for the Heating Contractor to sell and install. With SCHNACKE you can offer low first cost, low operating cost, low installation cost . . . . you can become "Home Air Conditioning Headquarters" in your community and enjoy increasing confidence and profits!



Sensibly designed for mass production and dependable performance and complete customer satisfaction!





SCHNACKE Home Air Conditioners are contained in well constructed, durable cabinets of heavy gauge metal in which all elements are housed. Factory assembled and tested, insulated against noise and sweating, piped and wired internally for easy installation in your home.

Get Ready NOW For AIR CONDITIONING PROFITS Next Summer!

The market for home air conditioning gets bigger and better each year. The trend is toward complete home air conditioning rather than room conditioning, and the logical man to get these extra sales and profits is the warm air heating contractor.

SCHNACKE provides field-tested home air conditioners of simple design and effective performance — at prices that permit you to sell competitively — at a substantial profit. And SCHNACKE will back your local selling efforts with a strong promotional plan.

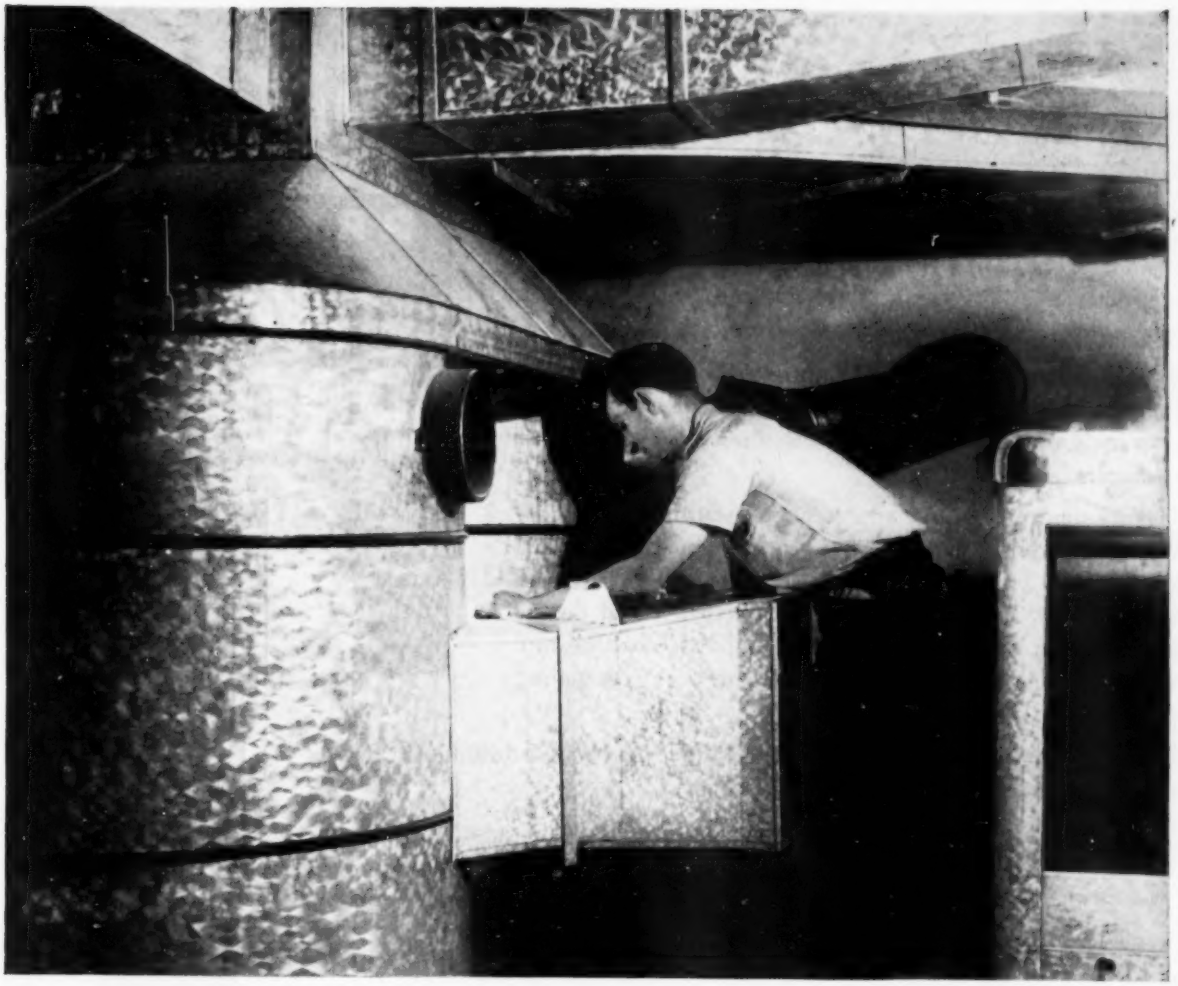
GET THE FACTS! Write on your Company letterhead for catalog and proven sales plan.

TWO SIZES:

3 Ton and 5 Ton capacities, adaptable to homes of any size. Over-all cabinet dimensions are 37½" wide, 27" deep, 42" high . . . small enough to fit into out-of-the-way places. All standard components using Servel supermatic Compressor.

SCHNACKE, INC.

Manufacturers of Compressors and Air Conditioning Equipment
1103 N. Governor St., Evansville, Ind.



The LOW-COST SHEET

is Galvanized Steel

When you compare galvanized sheet steel with other metals on the basis of equal strength, you will find a substantial difference in cost. Other metals must be used in relatively thick and expensive gages to equal the strength and stiffness of steel in comparatively light gages.

Or, if you compare galvanized steel with other metals in equal weights — you will see that steel is again priced lower.

Bethlehem Galvanized Sheets are made from strong, durable steel, either plain or copper-bearing, and are coated with Prime Western zinc for good corrosion-resistance. They are easy to handle without kinking, they have excellent workability, they give a finished look to any job.

Bethlehem
GALVANIZED
Steel Sheets

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation

Export Distributor: **Bethlehem Steel Export Corporation**

★ BETHLEHEM STEEL ★

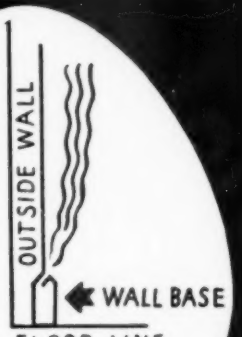
Brandes WALL BASE Heat

YES, today's better method of warm air heating is definitely wall to wall, radiant baseboard heating. The consumer is asking for it, architects and builders want it, you need it for leadership in your area.

Here is a product which will bring you new customers, and high profits. Get the jump on competition with a product that sells itself with down to earth, *common sense sales appeal* that customers can see.

Having pioneered warm air baseboard heating, Brandes offers you a product with over five years of actual field proven results, with installations from coast to coast. You can install Brandes Base with full confidence that it will do the job required. Get the **best** in warm air baseboard heating with a product which has patented features for your selling protection.

PRODUCES NEW PROFITS



Let us show you how you can install Brandes Baseboard heating at no more cost than your present conventional system.

BRANDES BASE WILL NOT STREAK WALLS

GET THE FACTS TODAY

Choice distributor and manufacturers representative agreements will soon be awarded. Your inquiries are invited.



FOR FURTHER INFORMATION
ASK YOUR SUPPLIER
OR WRITE TO

BRANDES COMPANY
2046 WINNEBAGO
MADISON 4, WISCONSIN

REPAIR PARTS

FOR ALL

FURNACES, BOILERS

AND

OTHER HEATING UNITS

BRAUER REPAIR PARTS — STOVE FURNACE BOILER — OIL STOVE RANGE

WE SPECIALIZE IN GENUINE REPAIRS

THE COMPLETE HEATING SUPPLY HOUSE

OFFERING ALL APPROVED BRANDS OF

ATTIC FANS	FILTERS	REGISTERS
BOILER CEMENTS	FURNACE CEMENT	ROOF COATINGS
BLOWERS	FURNACE PIPE	SMALL TOOLS
CLEANERS	FURNACES, ALL FUELS	STOKERS
CONTROLS	GAS BURNERS	UNIT HEATERS
CONVERSION BURNERS	HUMIDIFIERS	VENTILATORS
DAMPERS	METAL SCREWS	WATER COILS
DRAFT CONTROLS	OIL BURNERS	WATER HEATERS
FANS	SMOKE PIPE	WATER SOFTENERS

OUR INSULATION DIVISION
can supply insulation for all needs

BRAUER INSULATING PRODUCTS

ASBESTOS		Insulation for	
Millboard	Tape	Ducts	Refrigerators
Paper	Cements	Buildings	Boilers
Pipe Covering	Boiler Covering	Roofs	Pipes

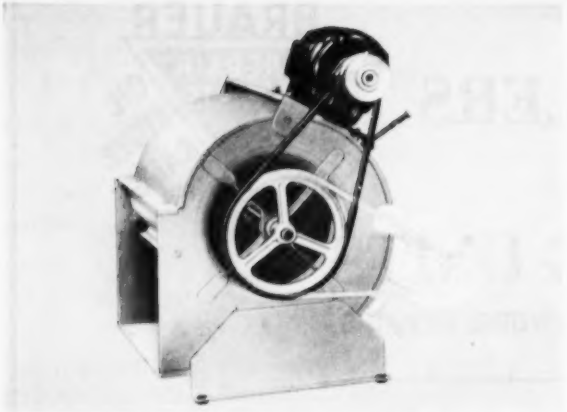
Distributors for such well known brands as

PHILIP CAREY ASBESTOS PRODUCTS
"FIBERGLAS" "KAYLO" & "ULTRALITE"
UNIBESTOS & AMOCEL

A. G. BRAUER SUPPLY CO.

2100 WASHINGTON AVE. ST. LOUIS 3, MO.

Brundage... HEADQUARTERS
FOR TOP-QUALITY AIR CONDITIONING BLOWERS



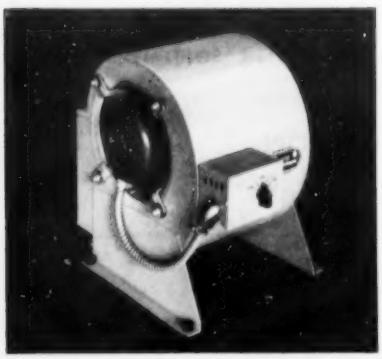
SERIES "X" BLOWER ASSEMBLIES

... used as standard equipment by the leading furnace manufacturers. For all hi-boy, low-boy, counterflow and horizontal furnaces of 40,000 to 200,000 BTU rating. Available in four standard discharge styles: Bottom horizontal, top horizontal, bottom vertical, top vertical. Duo-multiblade wheel, statically and dynamically balanced ... one-piece bridge motor mount ... self-aligning bearings ... four-point bearing suspension ... heavy-gauge cold-rolled steel scroll.



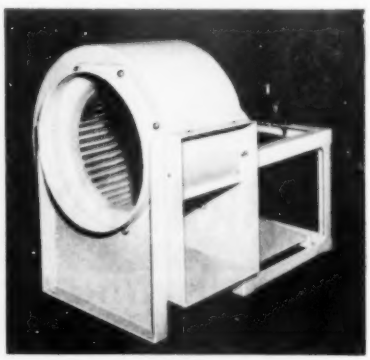
BLOWER-FILTER PACKAGE UNITS

... for converting coal, oil or gas gravity furnaces to forced air. Available in five sizes for furnaces ranging from 80,000 to 225,000 BTU rating. Air handling capacities from 1,200 to 3,200 CFM at $\frac{3}{8}$" static pressure. Quiet running, economical to operate, easy to install. Easy access to filters and blower assembly through removable rear panel of smoothly styled cabinet. Motor has overload protection and resilient mounting.



DIRECT DRIVE BLOWER

... ideal for hi-boy, low-boy, counterflow and suspended furnaces. Can be designed into furnace in any operating position desired. GE motor functions efficiently at any angle — shaft down, up, horizontal or in any intermediate position. Lubrication sealed in for life. Five speeds available at a flick of a switch. 65,000 BTU capacity, compact size, 10½"x 15½"x 14¼". Balanced delivery ... quiet operation ... completely assembled, ready to mount in furnace.



BLOWER EXHAUSTER

... for industrial ventilation, fume and smoke removal. Easily adaptable to induced draft systems. Indoor or outdoor installations. Single width, single inlet. Higher static pressure, faster air removal, quiet operation. Adjustable discharge angle. Compact — does not require a cabinet or complicated superstructure. Can be fastened on wall, up out of the way. Made of heaviest possible gauge steel.

Send for complete data on Brundage air-conditioning blowers — standard of the industry for 35 years.

SEE US AT BOOTH 2-304 INTERNATIONAL HEATING AND VENTILATING EXPOSITION ...

Brundage COMPANY

Blower Specialists Since 1919

516 North Park

YOU MAY save 3.15 POUNDS PER SHEET*

WITH

MicroRold®

STAINLESS STEEL



When you order sheet by gauge number the permissible A. I. S. I. variation in thickness is plus or minus 10%. Thusly, if you order 18 gauge, you may receive a sheet .052 thick when .0475 would suit your purpose. Using a standard 18 gauge 36"x120" sheet as an example, the theoretical weight is 63 pounds, but this weight could permissibly vary between 65.52 pounds and 59.22 pounds.

A sheet of MicroRold .0475 thick with a tolerance of only 3% would weigh 59.85 pounds thus insuring a saving of 3.15 pounds from the theoretical average-weight, or 5.67 pounds from the maximum, while still remaining within the 18 gauge ordering range.

Weight of One Sheet of 18 Gauge 36" x 120" Plus or Minus 10%

.052"—65.52 Pounds .051"—64.26 Pounds .050"—63.00 Pounds .049"—61.74 Pounds .048"—60.48 Pounds .047"—59.22 Pounds	Theoretical Wt. 63.00 Pounds

Weight of the same size sheet of .0475 plus or minus 3% is 59.85 pounds with an average saving of 3.15 pounds per sheet.

Multiply this saving by the number of sheets you use per month and the price per pound and you have a good dollar and cents reason for buying MicroRold.

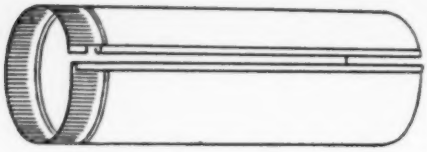
** Each additional 1/1000" of thickness adds 1.26 pounds weight per sheet.*

WASHINGTON STEEL CORPORATION

WASHINGTON, PENNSYLVANIA



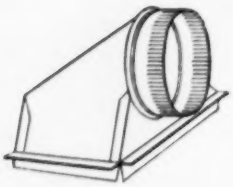
90° Adjustable Elbow, 4-piece





Vertical Diverter

EXCELSIOR
THE COMPLETE LINE



No. EP3 Top Take-Off Fitting Square to Round

Galvanized Pipe, Elbows, and Angles

Gravity Warm Air and Return Air Fittings

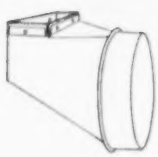
Forced Air Ducts and Fittings for —

- Standardized Take-Off System
- Extended Plenum System
- Perimeter Heating System
- Small Pipe High Velocity System

Stainless Steel Chimney Liners for
Gas Heat Installations

Blued and Walnut Stovepipe and Elbows

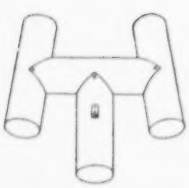
Gas Diverters and Sheet Metal Specialties



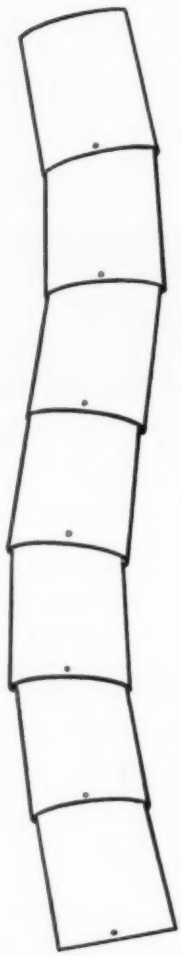
No. 710 Boot

for

"Quality, Service, and Profit"
Consult Excelsior on Your Requirements



Style A Chimney Top



Flexible Snake Section for chimney offsets, stainless steel, 7-piece, 48" long

Write for new 1953 Catalog 9A for details and prices on complete line

THE EXCELSIOR STEEL FURNACE COMPANY

ADI STANDARDIZED FITTINGS

118 S. CLINTON ST. **Phone: FRanklin 2-8120** **CHICAGO 6, ILL.**

EXCELSIOR HEATER & SUPPLY DIV.
The Excelsior Steel Furnace Company
879 Hersey Ave., St. Paul 4, Minn.
Telephone: NEstor 7255

BREX & BIELER DIV.
The Excelsior Steel Furnace Company
229 Marion St., Brooklyn 33, N. Y.
Telephone: GLenmore 2-7881

EXCELSIOR HEATING SUPPLY DIV.
The Excelsior Steel Furnace Company
526 Delaware St., Kansas City 6, Mo.
Telephone: Victor 3715

Only Coleman makes Blend-Air

REVOLUTIONARY HEATING AND VENTILATING SYSTEM

OIL GAS LP-GAS



1-2-3 OF BLEND-AIR

This easy-to-install system has (1) Magic Blender in each room, equipped with new Coleman Thermostat Air Control; (2) revolutionary 3½-inch Heat Tubes and (3) compact Blend-Air furnace.

GIVES LOW-COST UNIFORM HOME COMFORT

The Automatic Comfort Your Customers Want — Helps You Sell Homes

LOW COST

Factory-engineered, factory-made to speed installation and keep cost down.

WIDE HEAT RANGE

Gas furnaces from 75,000 to 100,000 BTU input. Oil from 58,000 to 97,000 BTU output.

MIRACLE COMFORT

With the new Coleman Thermostat Air Control, you can adjust warmth for each individual room and maintain constant, even comfort at the desired temperature.

PACKAGED COMPLETE

Made only by Coleman, delivered all complete—ready for installation.

FAST-SELLING

Economy and Coleman reputation give quick buyer appeal and acceptance.

Send for information on this system that revolutionizes heating installation, brings the cost low.

Backed by nation-wide Coleman advertising. The Coleman Company, Inc., Wichita 1, Kansas.

"IF IT ISN'T COLEMAN, IT ISN'T BLEND-AIR"

Comfort costs so little with

Coleman Blend-Air®

AMERICA'S LEADER IN HOME HEATING

AGA APPROVED OR LISTED WITH UNDERWRITERS' LABORATORIES

See our catalog in Sweet's File for Builders

THE COLEMAN COMPANY, INC.
Dept. AA-753-4, Wichita 1, Kansas
Please send information on Coleman Blend-Air
☐ OIL ☐ GAS ☐ LP-GAS

Name _____

Street _____

City _____ *State* _____

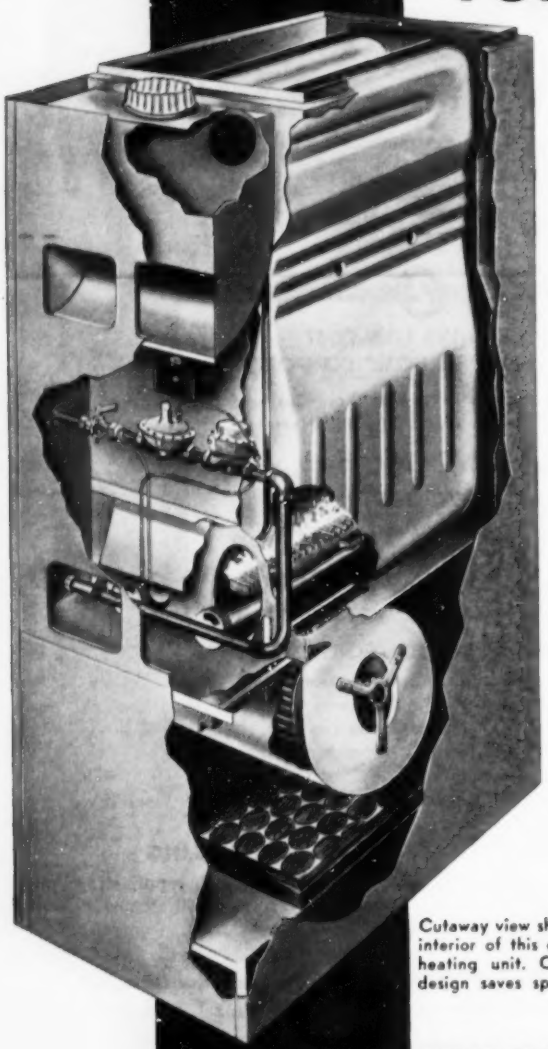
No matter how big or small your home, there's a Coleman to heat it better

HEATWAVE ANNOUNCES

A FULL LINE OF

Gas Fired

FORCED AIR FURNACES



6 MODELS AVAILABLE
IN A RANGE OF SIZES . . .

80,000; 100,000; 120,000; 140,000; 160,000; 200,000
BTU Input . . . Low Installation Cost . . . Packaged Unit . . . Factory Wired and Assembled

Greater Sales . . . Greater Profits to You!

- *Fire tested at factory for performance
- *Competitively priced . . . loaded with quality features
- *Everything you want when the problem is low cost heating
- *10-year factory Guarantee
- *Easy to Service . . . Large access doors

Factory Assembled . . . to save you time and money

PERMITS EASIER HANDLING AND MORE SIMPLE, LESS EXPENSIVE INSTALLATION

A. G. A. APPROVED

Cutaway view shows the interior of this efficient heating unit. Compact design saves space.

We also manufacture a complete line of Floor Furnaces and Wall Heaters in sizes from 25,000 to 75,000 BTU Input.

WRITE OR WIRE TODAY FOR NAME OF YOUR NEAREST DISTRIBUTOR
GET THE FACTS

Southwest Manufacturing Company

BOX 28 AURORA, MISSOURI

See Our Exhibit at the Eleventh International Heating and Ventilating Exposition, January 26-30

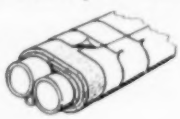


How to wrap up a tough insulating job... in a hurry!

MICROLITE *Glass Fiber Insulating Wool* goes around this air conditioning duct with the greatest of ease. The men simply snip off a section of the feather-light blanket, pull it snugly around the duct, and secure it with glass tying cord. A single, simple wrap-around operation—and the duct is well insulated against heat loss or gain. Microlite comes to you in resilient blankets up to 72 inches wide, 200 feet long, 3 inches thick, compressed in easily-stored rolls.

You can't conscientiously proceed with any insulating job until you've investigated Microlite, a product of Glass Fibers' exclusive electronic-extrusion process. Write for the facts. Glass Fibers Inc., 1810 Madison Avenue, Toledo 2, Ohio.

MICROLITE *insulates effectively against heat transfer.*
MICROLITE *is pleasant to handle, cuts with scissors.*

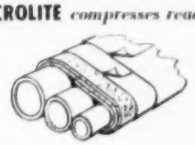


STEAM-TRACER LINES



VALVES AND FITTINGS

MICROLITE *weighs as little as* $\frac{1}{2}$*-pound per cubic foot.*
MICROLITE *compresses readily, springs back fully.*



NESTED PIPES



DOMESTIC BOILER

MICROLITE *is shipped in space-saving compressed rolls.*
MICROLITE *is an excellent absorber of unwanted noise.*



WARM AIR FURNACE



AIR CONDITIONER

MICROLITE *is inorganic, resists fire and moisture.*
MICROLITE *is tough, withstands rough handling.*



GLASS FIBERS INC.

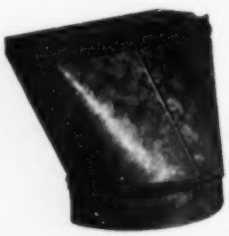
Makers of glass fibers by the ELECTRONIC-EXTRUSION process . . . developed, patented and used exclusively by Glass Fibers Inc.

VITRON Yarns • Rovings • Micro-Fibers • Pipe Wraps • Industrial Mat • DURAMAT Vapor Barriers
VIBRAGLASS Machinery Mounting and Packaging Materials • COUSTIC-AIRE and THERMO-JET Aircraft Insulations

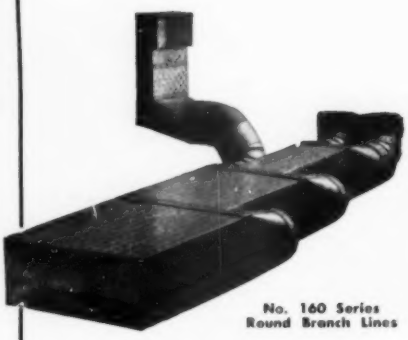
"SNAP-RITE"

PREFABRICATED AIR DUCT AND FITTINGS

. . . a complete, fast-working line for the modern contractor



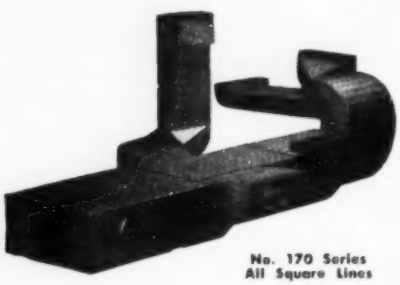
No. 110 BOOT



No. 160 Series
Round Branch Lines



No. 111 BOOT



No. 170 Series
All Square Lines

In times like these you have to be able to meet competition on an even footing in order to make money and stay in business. One way to be sure you're doing your utmost is to figure your installation jobs with GRAY "Snap-Rite" Fittings. You know then that you have left no stone unturned in your efforts to complete jobs in the quickest manner and with the least amount of difficulty.

Gray "Snap-Rite" Fittings are designed for quick assembly and erection — you can't go wrong when you use "Snap-Rite".

Wall Stack and Fittings in 3¼" standard depths — Trunk Pipe and Fittings in 8" standard depths.

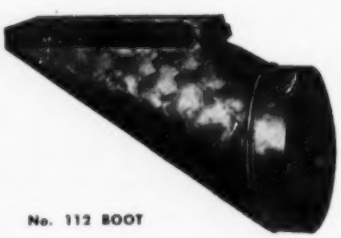
Investigate, too, our complete line of gutter fittings.



No. 160 Takeoff Round Pipe to carry branch in or below joist.



No. 164 End of Line Center Takeoff. For use with 2 No. 160.



No. 112 BOOT



No. 113 BOOT

GRAY

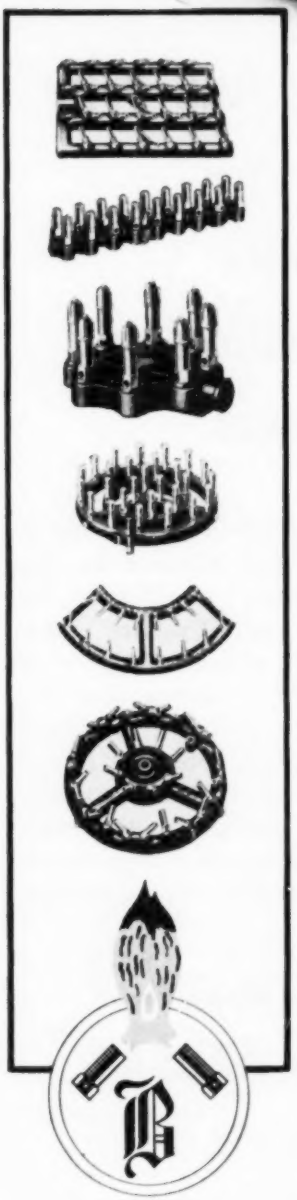
METAL PRODUCTS, INC.

30 Carlton Street

Rochester 7, New York

BARBER *Gas Burners*

FOR EVERY GAS HEATING PURPOSE



DESIGNED FOR SERVICE, EFFICIENCY AND TROUBLE-FREE PERFORMANCE

Barber Gas Burners meet the exacting requirements for all types of gas heating applications. Every Barber unit bears the stamp of Barber know-how—35 years of experience, expert craftsmanship, quality production. Barber engineers create and build the exact type and size of burner unit to fit any gas appliance, using natural, manufactured, Butane or bottled gas.

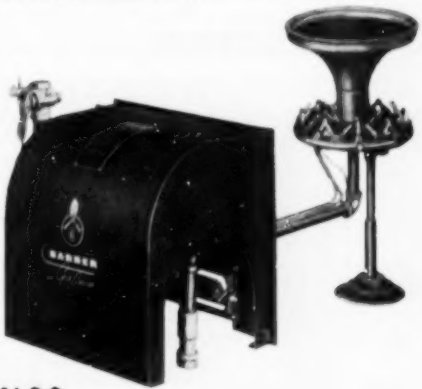
Our heating specialists and engineering consultants are ready to serve you.

Barber Conversion Gas Burners are designed for quiet and economical operation. They are the products of Barber craftsmanship and engineering perfection which guarantees a durable and efficient conversion burner.

Barber Gas Burners are made in sizes, shapes and capacities to suit all round or oblong furnaces or boilers, and to burn any kind of gas. The semi-steel deflector deflects and spreads the burner flame and directs it to the side walls of the combustion chamber, insuring maximum efficiency. No refractories are required.

The new Barber "Junior" Conversion Burner is used in any type boiler, furnace or winter-air conditioning unit.

APPROVED BY THE AGA

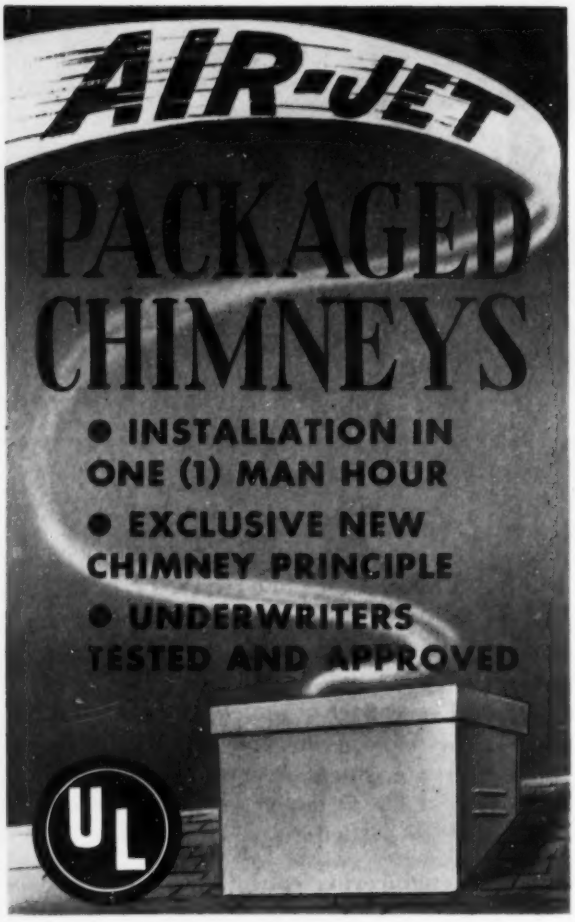


WRITE FOR COMPLETE CATALOG

the *Barber Gas Burner* co.

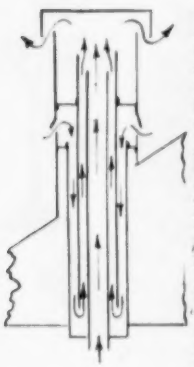
A LEADER FOR MORE THAN 35 YEARS

3708 SUPERIOR AVENUE CLEVELAND 14, OHIO



AIR-JET is the new word . . . the last word in a PACKAGED CHIMNEY! New Jet boosted air-cooled principle affords light yet sturdy construction. Saves enough space for an average linen closet! Saves time and money on-the-job.

SPECIFICATIONS (TYPE "O" FOR ALL FUELS)



IT COSTS LESS

Only 1 man hour labor required for average installation . . . no cement . . . no special tools . . . nothing extra is needed for installation . . . no assembling—READY TO INSTALL . . . factory painted.

STURDY CONSTRUCTION

Lightweight aluminum with shock-proof, high temperature porcelain steel smoke pipe. Weighs less than 100 pounds . . . Anti-downdraft top . . . raingroove flashing built-in.

TESTED AND APPROVED

by Underwriters Laboratories for zero clearance from wood . . . windload tested for 25 pounds per sq. foot.

Above left is the airflow diagram. AIR-JET chimneys are available in standard 17" square and deluxe 17"x34" sizes. 6" smoke pipe. Write for further order information.

GENERAL PRODUCTS COMPANY
FREDERICKSBURG, VIRGINIA

SEND FOR YOUR COPY TODAY . . .

A complete reprint, under one cover, of Professor S. Konzo's invaluable series of articles —

The

"How, What And Why"

of the New

Winter Air Conditioning Manual

Everyone who is now using or expects to use the new "Code and Manual for the Design and Installation of Warm Air Winter Air Conditioning Systems" will find Professor Konzo's series a source of much practical help in understanding the Code and correctly applying it to actual jobs. In this great series, Professor Konzo not only explains step by step exactly how to use the Code, but, in addition, tells in detail of the research and experience that is behind each step in the suggested procedures.

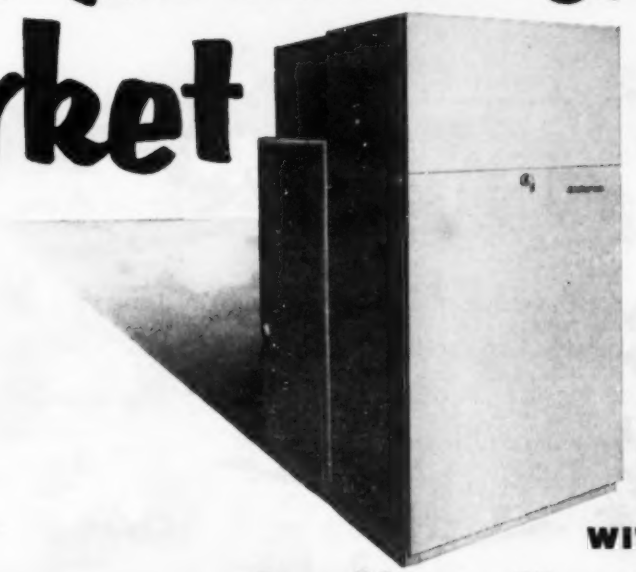
Price — Only $1.00 per copy

AMERICAN ARTISAN

6 NORTH MICHIGAN AVE. CHICAGO 2, ILLINOIS

TYPHOON HANDS YOU THE KEY TO A

new billion-dollar market



MODEL S-W
2-3-5
TON
SIZES

WITH

Cooling-Heating Units

FOR THE HOME

Take a quick survey today. How many new homes going up in your area? How many old homes already have warm air ducts? It adds up to a boom market for year-round air conditioning — and it's yours with Typhoon Model S-W!

43 YEARS OF COMFORT ENGINEERING IN THESE EXCLUSIVE TYPHOON FEATURES!

ONLY TYPHOON has one-button control — summer or winter, a touch of a button brings cool air or warm . . . automatically!

ONLY TYPHOON has an all-copper condenser—it defies rust and corrosion, gives trouble-free service.

ONLY TYPHOON is a miracle of compactness—takes up less space than any other unit, can even fit into a standard closet!

ONLY TYPHOON has *completely* automatic changeover design—for switching from heating to cooling; no dampers to manipulate!

SIMPLE TO INSTALL — Just a few quick connections and within hours your Typhoon unit is ready to function.

INEXPENSIVE TO OPERATE — Engineered to the point of greatest economy consistent with dependable performance.

QUIET — Completely insulated heavy-gauge steel cabinet and floating spring base assure whisper-quiet operation.

A.G.A. APPROVED. Perfected, Tested and Factory-Guaranteed by Typhoon.

Year-Round Air Conditioning
With ONE CENTRAL UNIT
Fully Automatic

A TYPHOON S-W FRANCHISE

is your key to this great new home market — write, wire, phone for information today.

TYPHOON AIR CONDITIONING CO. INC., 794 Union Street, Brooklyn 15, N. Y.

Specialists in Air Conditioning Since 1909.

Metropac PROMISED

HOT NEWS for YOU

Here it is!

Metropac IS HERE!

JUNIOR

A warm air heating unit with built-in Domestic Hot Water Supply — priced at substantially lower cost than the usual furnace PLUS a separate water heater. Costs less to buy. Less to install.

See this unit in operation at the Chicago Show
Booths 1316-18-20

and, of course, for the Larger Home, nothing equals

Metropac DELUXE

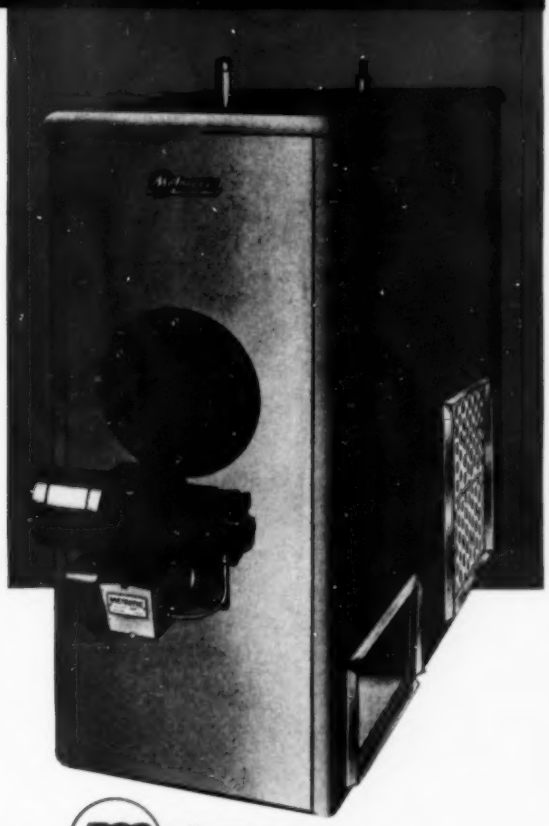
3 sizes: 70,000; 120,000; 180,000 B.T.U. Register Rating

for WINTER	for SUMMER	year 'round
Forced, humidified filtered warm air heat at low cost.	Circulating filtered humidified cool air automatically controlled.	Domestic Hot Water supply without added expense of separate heater.

If you do not get to the show, write Dept. AA-1 for full particulars.

METROMATIC

The NEW Metropac JUNIOR



Humidified, Filtered

Warm Air Heating

with built-in year 'round

Domestic Hot Water

for

Lower Cost Homes

All in ONE compact Unit

Check these features!

Four standard controls — Gun Type oil burner with exclusive removable head — 2-inch brick fire chamber — glass fibre filters — heavily insulated jacket — sturdy galvanized tank with magnesium rod to prevent corrosion — fully automatic.

See Metropac JUNIOR *in action*

at the Chicago Show
Booths 1316-18-20
January 26 to 30

Desirable franchises available to preferred dealers

MANUFACTURING COMPANY EVERETT 49, MASS.

TOPS . . . in Furnace Fittings MADE-RITE

Besides the BIG Savings in man-hours and installation costs for you, Made-Rite furnace fittings assure your customers of long dependable service free of trouble. Precision manufacture in every phase of design and fabrication gives you positive assurance that every fitting is free from the frailties that cost you much in time and money. Because we have built our business on a foundation of prompt service, any job, large or small, receives the same quick attention that helps you to complete installations faster and without fear of call-backs. One installation will prove to you that Made-Rite is an excellent source of supply . . . write for more information.



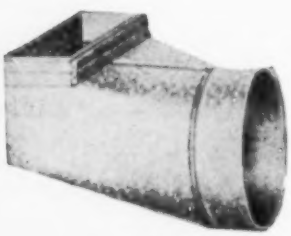
REGULAR ELBOW
STACK 90 #3



GALVANIZED
3 PIECE ANGLE 45



TRUNK LINE
No. 105 15" jts



FLATWAY
STACK-BOOT No. 12



TRUNK
LINE

We solicit wholesale jobbing inquiries . . . write us for more information.

"Made-Rite" COMPANY, INC.

10th & MONROE STREET **NEWPORT, KENTUCKY**

Mr. Builder:



The Name Vornado®

for years has symbolized the BEST in room cooling

Over 5,000,000 Satisfied Users

Vornado is a name in cooling appliances that means something to the prospective buyer because of an earned reputation for design—for convenient features and outstanding performance. When builders think of room air conditioning for new homes, more and more they are selecting Vornado—*the undisputed leader in the field.*

SEE OUR EXHIBIT
SPACE 619-A
CONRAD HILTON — CHICAGO
National Association of Home Builders Convention and Exposition JANUARY 18 - 22



MODEL 7SWAC
AIR CONDITIONER

A VORNADO AIR CONDITIONER IS YOUR BEST APPLIANCE BET!

When "added features" are needed to close home sales, you can depend on Vornado Air Conditioning to add that "extra appeal" to do the job.
Of all the appliances available for new home construction today, "Air Conditioned" is the magic word that sells homes. More people want it and fewer have it.

A PRODUCT OF
THE O. A. SUTTON CORPORATION • WICHITA, KANSAS
SPECIALISTS IN COOLING APPLIANCES

OUR VORNADO DISTRIBUTOR HAS A DEAL FOR YOU!

THE O. A. SUTTON CORPORATION
1812 WEST SECOND STREET
WICHITA, KANSAS

I am interested in knowing more about Vornado Room Air Conditioners for new housing. Please give me additional information on your special plan for builders.

*Name*_____ *Title*_____

*Firm Name*_____

*Address*_____

Forecast: Fair & Warmer



HOW'S THE *WEATHER* IN YOUR HOUSE?

We needn't tell *you* there's lots more to interior comfort than blowers, dampers, stackheads, and registers. There's that little matter of quiet, inner, happy satisfaction a man derives from turning an extra honest dollar from a day's work well done.

Adelta specializes in the kind of ducts, pipes, and fittings that spell extra honest dollars *and* interior comfort. And no wonder! To the homeowner they mean the finest double-seamed, leak-proof duct and fittings money can buy. To the man who does the job they mean less work, more time and money saved, fair and warmer business weather the year 'round.

If you'd like to be weatherwise *and* businesswise, you can be both with Adelta.



ONE-PIECE SNAP-LOCK CLEAT . . . is an exclusive feature on all ADELTA units, including take-offs, and reducers. Just push two sections together, and presto!—you have a rigid, leak-proof joint—without *any* drilling, notching or crimping to slow up the job. Cleat can't get lost in shipment or on the job because it's formed from same sheet as the fitting.



NEW PRE-NOTCHED COLLAR EDGES . . . save time on every collar edge connection because they're easily closed by finger pressure. No need for installer to notch edges, straighten with pliers and hammer them closed. Notches are die-cut in a U-shape, and corners rounded to prevent finger injury. Provided on all 4 sides of fittings with collars *at no extra cost.*

ADELTA

MANUFACTURING CO., INC.

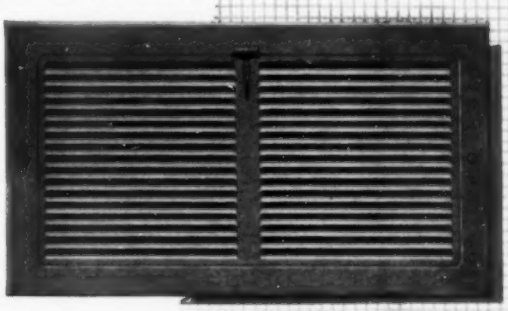
21st & Ellsworth Streets, Philadelphia 46, Pa.

Standardized Pipe, Duct, and Fittings

Write for General Catalog 453, Perimeter Catalog 353.

Auer fills all your Register needs
FROM ONE RELIABLE SOURCE

Why not take advantage of the time-saving convenience of filling all your register needs from the complete dependable line made by The Auer Register Co.? Here are registers and grilles for all purposes—gravity or air conditioning.

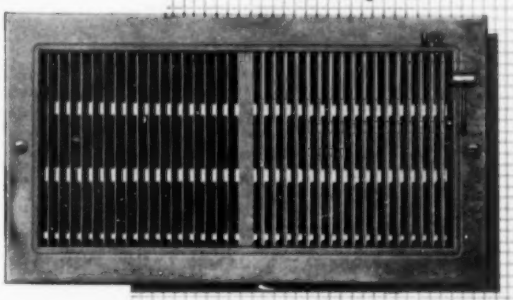


Auer No. 7032 Register with flexible fins and single valve

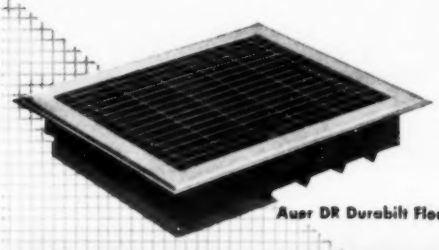
Auer REGISTERS
QUALITY CONTROLLED PRODUCTION

When you install Auer registers, you have the assurance of accurate dimensions and uniform high quality—the result of Auer's system of strict quality control of production.

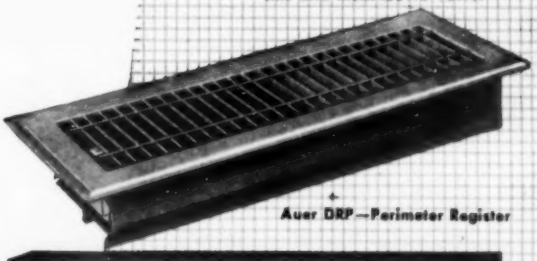
Write for the 30-page Auer Register Book for complete information.



Auer No. 4432 Register with flexible fins and multi-louvre valve.



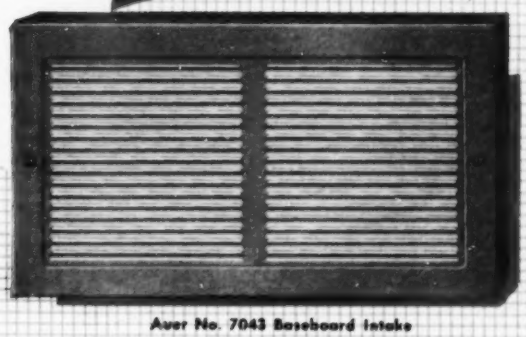
Auer DR Durabilt Floor Register



Auer DRP—Perimeter Register



Auer H-800 Heat Rite Baseboard Register



Auer No. 7043 Baseboard Intake

Auer REGISTERS and GRILLES

THE AUER REGISTER CO. 6600 CLEMENT AVE. • CLEVELAND 5, OHIO

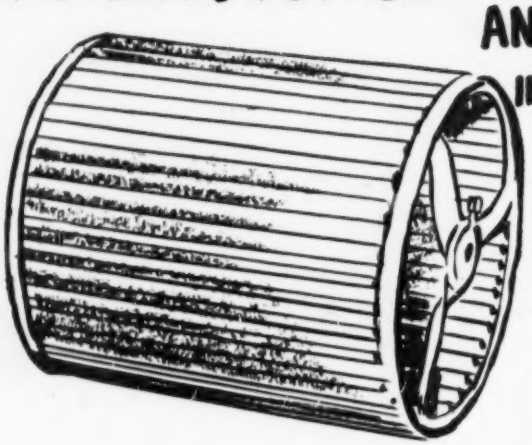
Canadian Distributer—Marchand Furnace Ltd., Tilbury, Ont.

Morrison Presents

the big three!



3 Great New Developments to be unveiled at THE INTERNATIONAL HEATING AND VENTILATING EXPOSITION



INTERNATIONAL AMPHITHEATRE, CHICAGO
JANUARY 26TH - 30TH

THESE THREE ADVANCEMENTS ARE OF SIGNIFICANCE TO MANUFACTURERS OF HEATING AND VENTILATING EQUIPMENT.

SEE THEM AT BOOTH 1217

MORRISON PRODUCTS *Inc.* 16816 WATERLOO ROAD CLEVELAND 10, OHIO

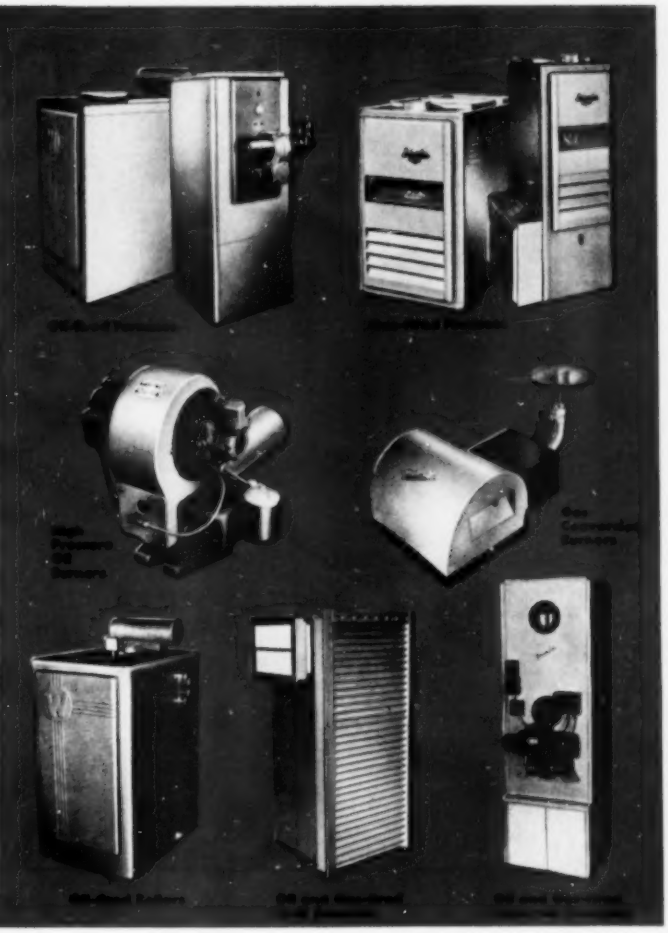
60 FEET OF BETTER HEATING

At Booths

1328-30-32-34-36-38

International Heating and Ventilating Exposition

Don't line up your sights on 1953 business until you see the Winkler display of the latest in automatic heating! Alive with features which mean economical operation . . . long life . . . satisfied customers. So complete a line that virtually every heating requirement can be met, whether for new homes or modernizing work.



SEE STARTLING *LIVE* DEMONSTRATION OF THESE TWO GREAT BURNERS!



LP

LOW PRESSURE OIL BURNER

See all the revolutionary features which make this low pressure burner a money-saving sensation! See the Winkler LP burn crankcase drainings, heavy unrefined oil, mixed oil and water. See the clogproof Nozzle and positive action Fuel Meter which saves heat usually wasted up the chimney.



ECONO-POWER

GAS-OIL BURNER

Has all the features of the Winkler LP Oil Burner . . . *plus easy convertibility to gas-firing*. As a gas burner it reduces heating costs by operation under controlled air pressure . . . with constant fuel-air mixture which assures dependable, economical performance. See this remarkable burner demonstrated!

WINKLER

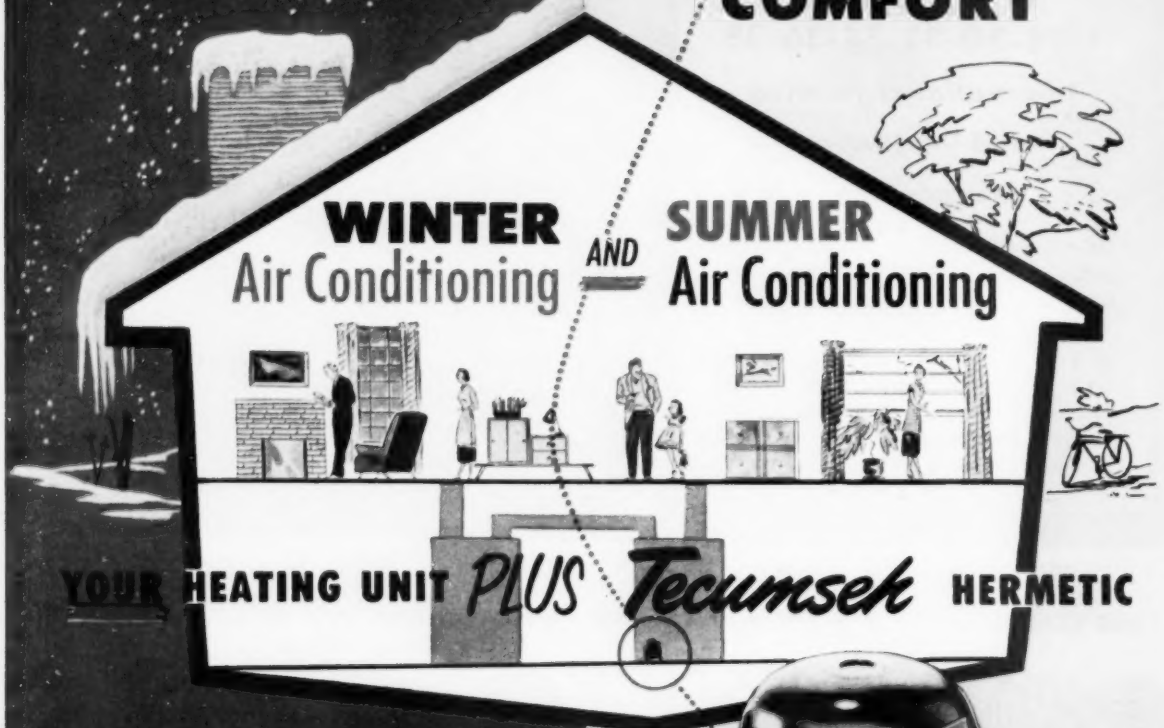
AUTOMATIC HEATING EQUIPMENT

U. S. MACHINE CORPORATION

Dept. A-13, Lebanon, Ind.

Mr. Furnace Manufacturer:

...NOW YOU CAN SELL YEAR-AROUND COMFORT



YOUR HEATING UNIT PLUS Tecumseh HERMETIC

When designing your furnace to include summer cooling for a true year-around air conditioning system, consider the advantages of a completely sealed Tecumseh hermetic compressor. The 3 H.P. Tecumseh hermetically-sealed compressor is designed primarily for use in year-around systems. This compressor will help your engineers to design the most dependable and efficient year-around air conditioning unit at the lowest possible price.

Yes, these new Tecumseh hermetics are the only compressors in the refrigeration industry today that offer so much for so little. Over 14 million Tecumseh hermetics now in the field attest to the acceptance of the Tecumseh hermetic. That is why furnace manufacturers are specifying Tecumseh in their new cooling units. And that is why it will more than pay you to investigate Tecumseh right now by writing us for complete details.

Remember, you can't go wrong when you specify the best—Tecumseh.



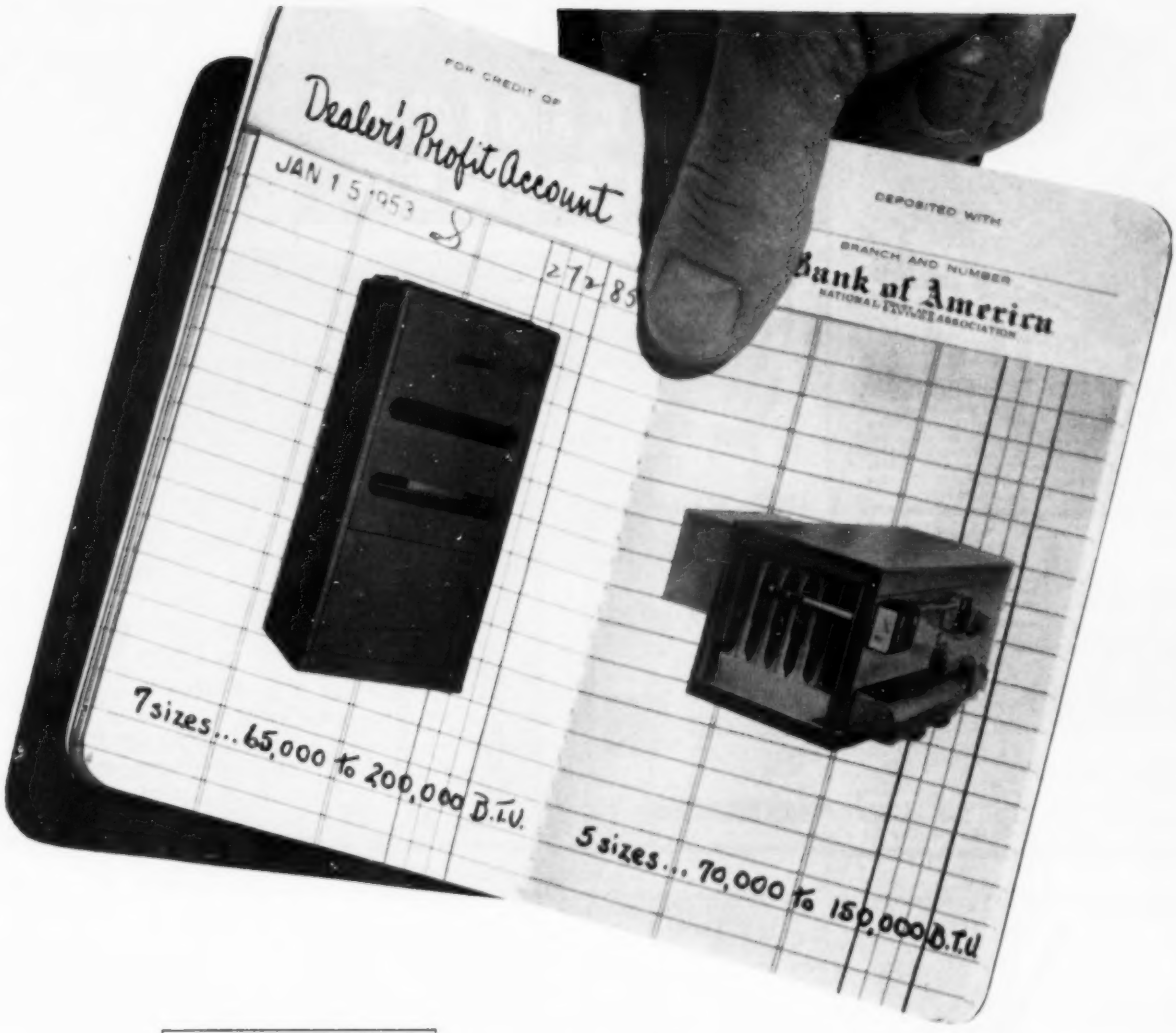
TECUMSEH

TECUMSEH PRODUCTS Company

TECUMSEH, MICH

EXPORT DEPT. 2111 WOODWARD AVE. DETROIT MICH

★ See the Tecumseh Hermetics at Booth 2-501 in Chicago, January 26 to 30.



SEQUOIA

closet'eer and horizontal gas furnaces mean profits plus

More and more heating dealers throughout the nation are finding that SEQUOIA is *the profit plus line*. Here's why:

Competitive Price—Sequoia *Closet'eers* and *Horizontals* are made in all the popular sizes . . . priced with furnaces offering far less quality in parts and workmanship.

Installation Ease—Designed for the faster, easier installations that mean extra dealer profits. *Closet'eer* has all controls on the face, every connection within easy reach. Compact *Horizontal* passes through scuttle holes without case disassembly.

Trouble-Free Performance—Service callbacks eating into profits? Switch to Sequoia for furnaces that assure years of trouble-free service . . . for a factory guarantee that backs dealers to the hilt!

Information regarding SEQUOIA Dealerships may be obtained from—

Sales Department

SEQUOIA MANUFACTURING CO.

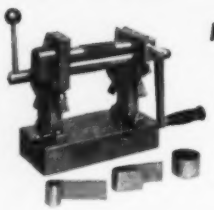
1000 Brittan Avenue • San Carlos 3, California

di-acro PRECISION MACHINES



DI-ACRO VARI-O-SPEED POWERSHEAR

With shearing speeds from 30 to 200 strokes per minute, the DI-ACRO POWERSHEAR cutting cycle can be set for speed of maximum efficiency for each shearing operation. Continuous action eliminates clutch engagement for ease of operation and high speed production. Capacity 16 gauge steel. 2 sizes—shearing widths 12" and 24".



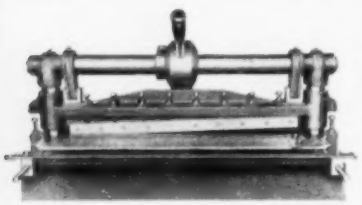
New DI-ACRO ROLLER

This revolutionary slip roll forms a perfect circle of any diameter in TWO passes through the forming rolls; also forms several bends spaced as desired in a single flat sheet. This is done by positioning the idler roll with a cam actuated lever. 4 models available. 6", 12" and 18" widths, capacities 16 gauge and up.



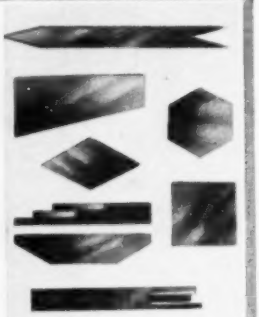
DI-ACRO HYDRA-POWER BENDER

This revolutionary, standard machine is quick converted into a "custom-built" unit exac suited for each bending job. Forms simple a complex bends in tubing and all solid duc materials. 2 sizes—radius capacity 9" and 24"



DI-ACRO SHEAR

Rapidly shears or squares ductile and pliable materials to die accuracy. Also cuts slits, strips, notches. Capacity 16 gauge steel. 4 sizes—shearing widths 6", 9", 12", 24". (Examples of parts at right.)







DI-ACRO BENDER

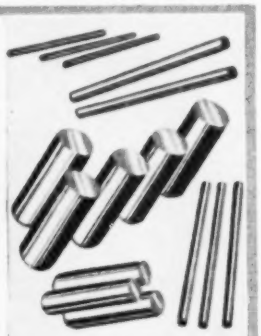
Makes simple and complex bends for "DIE-LE DUPLICATING" of an unlimited variety parts in tubing, angle, channel, rod, wire, moldi strip stock, etc. 5 sizes—capacity ⅛", ¼", ⅜", 1" steel bar. (Examples of parts at left.)

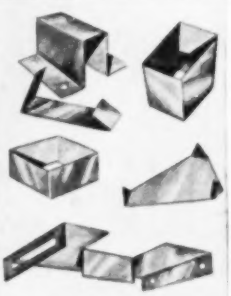
ALSO AVAILABLE IN POWER MODELS

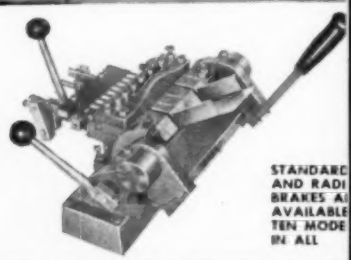


DI-ACRO ROD PARTER

Accurately "parts off" round materials without distortion at production speeds. 2 sizes—capacity up to ⅜" and ⅝" round steel bar.



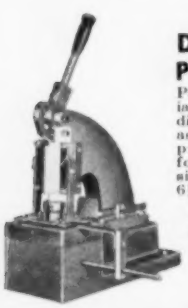




STANDARD AND RADI BRAKES A AVAILABLE TEN MODE IN ALL

DI-ACRO BOX FINGER BRA

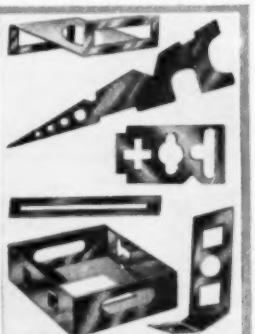
Replaces dies for experimental or production fo ing of simple and intricate parts. Capacity gauge steel plate, forming widths of 6", 12", 18",

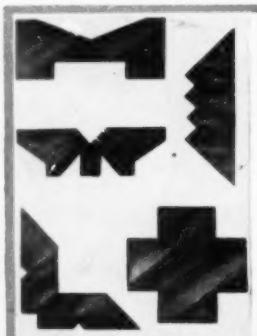


DI-ACRO PUNCH PRESS

Punches holes of variable shapes up to 4" diameter—also serves as a precision punch press for blanking, forming, drawing. 2 sizes—throat depths 6¼" and 12¼".

POWER MODELS ALSO AVAILABLE





DI-ACRO NOTCHER

Eliminates need for punch press and dies on many notching operations. Cuts 90° notches up to 6"x6" in 16 gauge steel in one operation.

POWER MODELS ALSO AVAILABLE





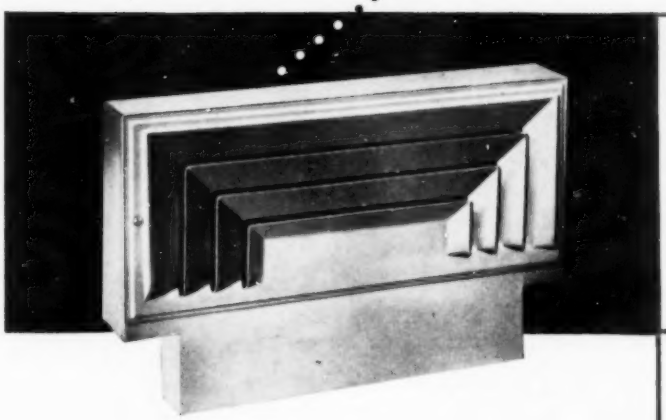
DI-ACRO is pronounced "DIE-ACK-RO"

di-acro O'NEIL-IRWIN MFG. CO.

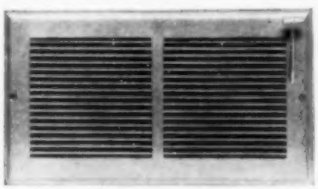
394 EIGHTH AVENUE • LAKE CITY, MINNESOTA

Send For 32-Page "DIE-LESS" DUPLICATI Catalog

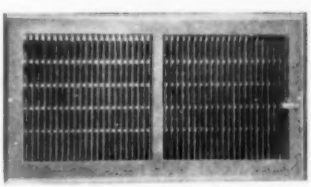
they sell themselves . . .



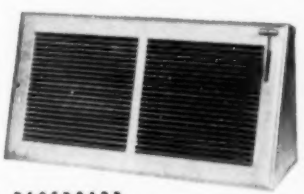
MIDCO PERIMETER REGISTERS



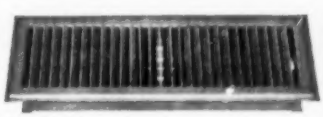
HORIZONTAL FIN SIDEWALL #20



VERTICAL FIN SIDEWALL #30



BASEBOARD PROJECTION REGISTER #243



PERIMETER FLOOR REGISTER #512

Yes, sir, they *really* do — and we can prove it. Last summer we sent a letter to several hundred jobbers telling about MIDCO Perimeter Registers, and showing illustrations. Then orders poured in from all over the country - from new and old jobbers in Seattle, Chicago, Fargo, Davenport, Boston, Los Angeles, Milwaukee, and many other places. Jobbers in big towns and little towns all wanted MIDCO.

The repeat orders that followed proved that MIDCO satisfies dealer and customer, too — proves it's a profitable line for you to carry.

THE MIDCO LINE includes a wide variety of high and medium velocity registers, conventional forced air registers and gravity registers, grilles, floor faces and floor registers. These are available in all commonly used sizes: for example, nos. 30 and 34 Multiple Louvre Registers come in 44 sizes ranging from 6 x 4 inches to 30 x 10 inches. MIDCO Registers sell fast and they bring repeat business. Jobbers who carry the MIDCO line say, "It pays to sell quality products like MIDCO."

Let us tell you more about the MIDCO line. Just write in for the complete story.

GET IT FROM YOUR JOBBER

Jobber outlets available in some areas. Write for catalog and price lists.

MIDCO
REGISTER CORPORATION
1059 GRAND AVENUE • ST. PAUL 5, MINNESOTA

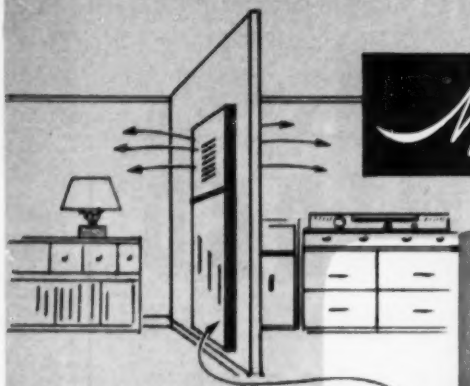
...IT OUT-PERFORMS COMPETITION

...IT MEANS EXTRA PROFITS for YOU BECAUSE IT SELLS!

Monogram

OIL WALL FURNACE

PROVIDING THERMOSTATICALLY CONTROLLED HEAT





IDEAL FOR SMALL HOMES

Any 4 or 5 room house may be heated comfortably with MONOGRAM Oil Furnace. It's fully automatic, the heating thermostatically controlled night and day. Dual registers (as shown) make it doubly effective.

NO EXPENSIVE DUCT WORK OR FLOOR SPACE REQUIRED

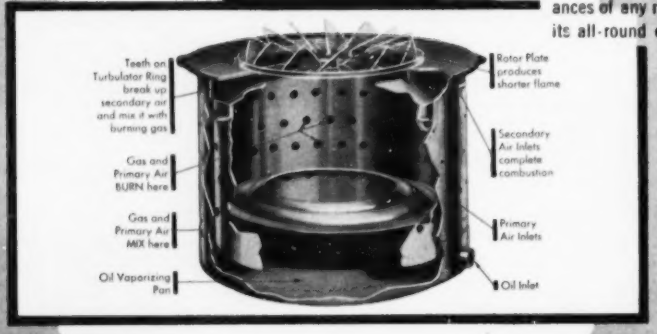
The MONOGRAM Oil Furnace fits into the wall. Easily installed in a day. Projects into the room only 3½ inches. Heated air is forced out at eye level. Furniture may even be placed right in front of the unit. Saves owner in many ways!

"FORCED AIR "BURNER PRODUCES MORE HEAT AT LESS COST.....

This exclusive feature of the MONOGRAM Oil Furnace makes the great difference! The design of this Burner, which is patented, enables it to actually produce more BTU's of heat for its size, and to deliver a wider range of operation and to work just as efficiently in cold as in mild weather. It's super!

...a CENTRAL HEATING PLANT at SPACE HEATER COST.....

The MONOGRAM Oil Furnace is the answer to low-cost heating in small homes. It's so adaptable, and provides dual heating as illustration shows. And ...it's economical. The patented "Forced Air" Vaporizing Burner gives more BTU's per gallon of oil than any other! This unit fits in any wall and enhances the appearances of any room. There's none to equal its all-round efficiency and adaptability.



SPECIFICATIONS

BTU Rating . 65,000
Height from Floor of Front of Cab. . 74½"
Height from Floor of Back of Cabinet . 72"
Width of Front . . 32"

MF IN THE WALL

Monogram Furnace

MADE BY

THE QUINCY STOVE MANUFACTURING CO.

825 SOUTH FRONT STREET

QUINCY . . . ILLINOIS

SEND COUPON TODAY.....

We are interested in what you say about MONOGRAM Oil Furnaces. Please furnish complete information, price, etc.

NAME_____

COMPANY _____

ADDRESS_____

CITY_____ ZONE____ STATE_____

Announcing... Auto-flo's DRIP-PROOF Humidifier Plate

THIS IS Auto-flo's Stainless Steel DRAIN CLIP that Prevents WATER DRIP



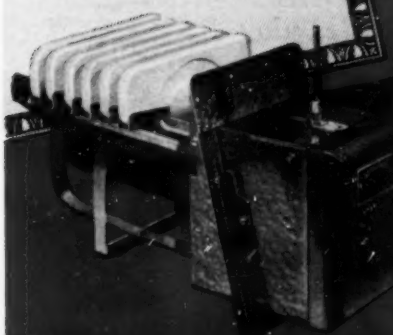
Pat. Pending

WATER DRAINS into PAN BELOW

DRAIN CLIPS PREVENT This:



ONE YEAR FACTORY Guarantee ON ALL PARTS



NO FLOAT

NO DRIP

NO CLOG

Laboratory tests prove that under certain conditions, all humidifier evaporating plates will drip. Auto-Flo's evaporating plates, equipped with new stainless steel drain clips, eliminate any possibility of dripping.

AUTO-FLO CORP.
13526 Fenkell Ave. Detroit 27, Mich.

AUTO-FLO CORP.
13526 Fenkell, Detroit 27, Mich.

Please send me full information on Auto-Flo "100" Automatic Humidifier.

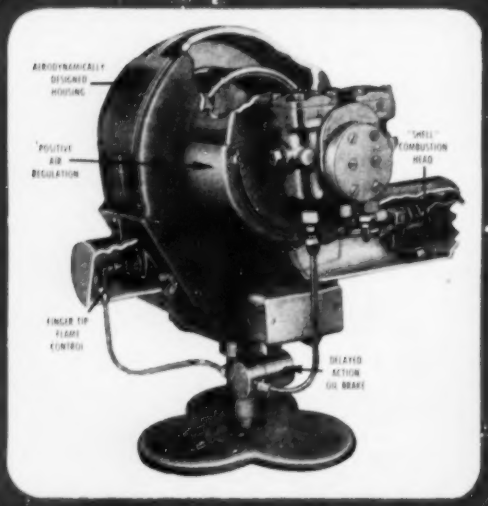
NAME _____

ADDRESS _____

CITY _____ STATE _____

Greatest Oil Heating Improvement in Years

CUTS HEATING COSTS UP TO 36%



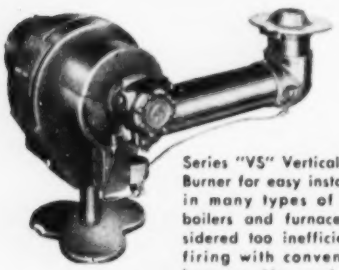
SUN-RAY

OIL BURNERS

Today's Finest

PUT YOU WAY AHEAD WITH THESE EXTRA VALUE SELLING FEATURES

Cleaner Heat—Series "S" Burner burns catalytic as well as straight distillate oil cleanly and completely. No smoke—no soot—no odor—no fuel waste. Three models: 0.7 to 2 g.p.h.—2 to 3 g.p.h.—3 to 6 g.p.h



Series "VS" Vertical Flame Burner for easy installation in many types of round boilers and furnaces considered too inefficient for firing with conventional burners. No combustion chamber — no complicated hearth to build—no moving parts in the combustion area. Two models: 0.7 to 2 g.p.h. and 2 to 3 g.p.h.

"Shell" Combustion Head—the famous patented dual carburetor that atomizes every particle of oil for most efficient combustion and economical heating.

Aerodynamic Housing—exclusive with Sun-Ray—provides smooth, controlled, metered air flow required for complete combustion and quiet operation.

Delayed Action Oil Brake—built into every Series "S" Burner—delays oil flow to the nozzle until air supply is at full capacity, assuring correct mixture of oil and air for complete combustion. At end of firing cycle, oil supply is cut off instantly. This prevents smoky starts, after-drip, odor, soot and pulsation.

Precision Construction—with components of finest quality, expert assembly and testing before shipment to meet exacting standards.

Top Performance—assures highest CO_2, lower stack temperature, 500° to 600° F. higher flame temperature, lower fuel consumption.

Get the Facts Today

SUN-RAY—FAMOUS THE WORLD OVER FOR QUALITY AND ECONOMY



Models for Every Heating Need in Sizes from 0.5 to 25 g.p.h.

SUN-RAY BURNER MANUFACTURING CORPORATION

139-34 QUEENS BOULEVARD • JAMAICA 2, N.Y.

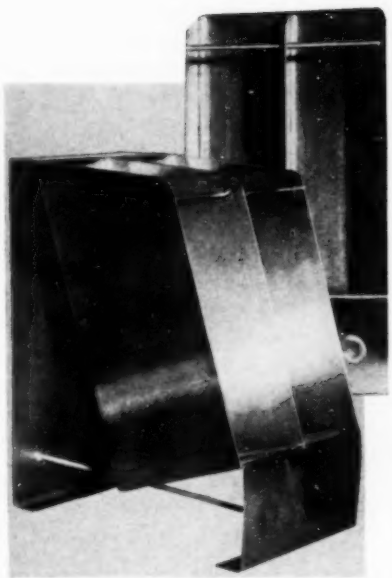
Visit us at Booth 2-424-428-International Heating and Ventilating Exposition, Chicago

SOME ANSWERS

TO YOUR SHOP QUESTIONS

ON forming STRAIGHT-CHROMIUM STAINLESS STEELS

This is one of a series of advertisements discussing the straight-chromium grades of Stainless Steel from the standpoint of fabricating performance. Other operations that will be considered are machining, cutting, deep drawing, spinning, welding and finishing.



Formed from
U·S·S 17 (Type 430) Stainless Steel

These utensil racks were fabricated from 16 gage sheets and ⅝" rods of U·S·S 17 (Type 430) Stainless Steel by Purity Manufacturing Company, Cattaraugus, N. Y. Forming was done on a press brake and bends exceeding 90° were accomplished without difficulty. Other fabricating operations included argon and spot welding and grinding.

Purity Manufacturing turned to straight-chromium fabrication more than a year ago, after years of specialization on dairy industry equipment of nickel-bearing Stainless Steel. They have encountered no difficulty in fabrication.

OF the Stainless Steels available today, straight-chromium grades—and especially U·S·S 17 (Type 430)—offer you the widest possibilities in fabrication and end use.

Press and brake forming of sheet and strip are among the most common shop operations encountered in working these grades. Here are a few facts to keep in mind for such operations in order to get the maximum performance from straight-chromium grades.

Type 430 Stainless Steel has a lower tensile strength than the nickel-bearing grades. This permits it to be formed on tools that have less power available than those used for nickel-bearing grades. Forming tools rated at a definite capacity for carbon steels are suitable for straight-chromium Stainless Steels of approximately the same thickness.

Although additional steps or operations may be required, fabricators who have worked with straight-chromium grades generally report that almost anything that can be made from nickel-bearing Stainless Steel can also be formed from straight-chromium grades.

In planning and layout, take into consideration the fact that Type 430 possesses directional properties. As a result, it is sensitive to longitudinal breaking in the course of lock seaming and bending. Additional steps or operations will offset this tendency.

In every case it will pay you to consult with our representatives concerning these grades. They will examine the job from the standpoints of both end use and shop equipment and give you their recommendations.



WRITE FOR OUR FREE BOOK

You'll find the full story on working characteristics of the straight-chromium grades of U·S·S Stainless Steel, as well as nickel-bearing grades, in our book "Fabrication of U·S·S Stainless and Heat Resisting Steels." For your copy, write to United States Steel Corporation, 525 William Penn Place, Pittsburgh 30, Pa.

UNITED STATES STEEL CORPORATION, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
NATIONAL TUBE DIVISION, PITTSBURGH • TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

U·S·S STAINLESS STEEL

SHEETS · STRIP · PLATES · BARS · BILLETS · PIPE · TUBES · WIRE · SPECIAL SECTIONS

3-43

USS

UNITED STATES STEEL

Each of our organizations is committed to a firm policy of the *"best possible service"* to every Warm Air Dealer, Sheet Metal Contractor and Roofer in the areas we are serving.

The Famous Furnace Co.
Cleveland, Ohio

The Famous Furnace Co.
of Akron, Ohio

The Famous Furnace Co.
of Lorain, Ohio

The Famous Furnace Co.
of Steubenville, Ohio

The Famous Furnace Co.
of Warren, Ohio

The Famous Furnace Co.
of Mansfield, Ohio

The Famous Furnace & Supply Co.
of Wheeling, W. Va.

Every employee will render our pledged service.

Furnaces • Cooling Equipment • Roofing
Sheets • Accessories • Machinery • Tools

Association Activities —

(*From page* 126)

ments for the convention and for the recently held joint meeting of the boards of the Carolinas-Florida-Georgia associations. These are just the major items of work performed in the administration of an association, which are in addition to the routine tasks of collecting revenue, keeping books, etc.

Alameda County Chapter Holds Annual Meeting

THE FURNACE DEALERS and Sheet Metal Contractors of Northern California, Inc. were hosts to the Sheet Metal Contractors Association of Northern California and the San Francisco Sheet Metal Contractors on the occasion of the group's annual meeting, held on December 4 in Oakland. More than 350 people attended the meeting which started with cocktails at 6:00 p.m. and included an excellent program of entertainment beginning at 9:00.

Canadian Chapter Elects President

C. E. ISRAEL was elected president of the Canadian Chapter of the National Warm Air Heating and Air Conditioning Association at its annual meeting held at Quebec City on December 4. Some 45 members and associates attended the two sessions. The Canadian Chapter now has nearly 600 members and operates 13 schools across the country.



C. E. Israel

Bulletin Urges Sale of Cooling Jobs

THE MICHIGAN HEATING & Sheet Metal Association, in a recent bulletin announcing its forthcoming 42nd annual convention, brings up a number of points of interest to heating contractors. "Why", it asks, "should a home be completely comfortable only during a portion of the year? The overheating of homes, shops, offices and factories in the summertime has caused a great amount of discomfort and illness. Why allow this condition to continue when the means is at hand to effect a change?"

The bulletin points out that every warm air heating job installed through the years is unfinished business, since this type of installation is readily adaptable to year 'round air conditioning. While the duct work might have to be modified, the work can be confined to the basement or outside the living quarters of the home. There are a number of good packaged air conditioning units on the market for original installations or for conversions, and the manufacturers and distributors of these units are willing to give any engineering assistance that might be necessary. "Don't fail

(*Please Turn to Page* 264)

A CINCH TO INSTALL

and the cost is small



Use Kno-Draft Overhead Air Diffusers (instead of conventional grilles) on your next residential warm air heating job. They're a cinch to install. Simply run your plenum up to the attic and take off to diffuser outlets in the room ceilings below. Use pre-fab ducts — round or rectangular — with wrap-around insulation.

You save time and work not only in installing but in figuring the job. The Kno-Draft selection chart gives duct and diffuser sizes quickly, and locating diffusers in the ceilings is done in a jiffy.

Installed cost for Kno-Draft Overhead Air Diffusers is seldom more than for conventional outlets — often less. Yet customer pleasure with the finished job is infinitely greater. He gets *even temperatures* without drafts or blasts of hot air, greater cleanliness, full freedom in furniture placement, worth-while fuel economy.

Find out how this industry-proved method of air distribution can step up the profit on your residential work. Mail the coupon today for full information. Connor Engineering Corporation, Danbury, Connecticut.

residential air diffusers®

CONNOR ENGINEERING CORP.
Dept. A-13 Danbury, Connecticut

Please send me full details about the "Kno-Draft Method" of residential forced warm air heating.

Name .....

Position .....

Company .....

Street .....

City ..... **Zone** .... **State** .....

Association Activities —

(*From page 262*)

the industry", the bulletin concludes. "If you don't do the job, others will."

Apprenticeship Contest

THE NATIONAL SHEET METAL Apprenticeship Cash Award Contest, conducted by the National Joint Apprenticeship Committee, will be sponsored jointly by the National Sheet Metal Contractors Association and the Sheet Metal Workers' International Association. The contest is open to first and second year apprentices. All apprentices who have not completed two years and not more than 4000 hours of apprenticeship training before March 15, 1953 are eligible to enter the contest. Contestants are requested to make their entries through their local Joint Apprenticeship Committee, by sending their names and addresses and the name and address of their employers to the local Joint Apprenticeship Committee as soon as possible.

Each local Joint Apprenticeship Committee should make its request to the Secretary of the National Joint Apprenticeship Committee, Joesph J. Kaberlein, 5911 N. Mobile Ave., Chicago 30, to obtain the number of questionnaires needed and drawings of the article to be made by each contestant. Each local Joint Apprenticeship Committee is requested to conduct a contest among its apprentices and mail the actual fitting made by the winning contestant to Secretary Kaberlein, postmarked not later than March 15, 1953.

Institute Honors Past President

A TESTIMONIAL DINNER for Walter Propper, past president of the Roofing & Sheet Metal Crafts Institute, Inc., was held recently at the Hotel Alden, New York. In making the opening address, Richard H. Freyberg, dean of the institute, said: "We all have good business ideas from time to time and when put into use we find they work out to good advantage. Because the industry as a whole would benefit proportionately if those ideas became the general practice, we should be willing to communicate them to all the members of the industry. Mr. Propper has introduced a number of recommendations that have helped a good deal in promoting interest in the work of the Institute and has plans still in abeyance that could do much toward increasing the organization's capacity to be of service to the industry. Walter is now chairman of the board of directors, from which office he may advance his program at the proper time."

Contractors Warned of New Ruling

THE SHEET METAL Contractors Association of Illinois is conducting a program that will aid their members to conform to the new interpretation of the Retailers Occupation Tax Act which makes them liable for taxes on all materials and parts used in fabrication of sheet metal products.

There's only 1 way!

TO KEEP FUEL OIL CUSTOMERS ... SATISFIED, INSTALL A GENERAL FUEL OIL FILTER

FOR PROTECTION OF FUEL OILS AND BURNER PARTS ... AND REAL PROFIT FOR YOU



GENERALS

* ELIMINATE CLOGGED NOZZLES AND BURNER PARTS, TRAP PARTICLES AS SMALL AS 5 MICRONS.
* ALLOW QUICK, EASY FELT CARTRIDGE REPLACEMENT — WITHOUT DISTURBING PIPING.
* CAN BE INSTALLED WITH A FEW SIMPLE HAND TOOLS AND JUST TWO PIPE CONNECTIONS.
* HAVE THE FINEST, ALL-WOOL FELT CARTRIDGES.
* HAVE STURDY INNER WIRE SCREEN TO BACK UP FELT AND PREVENT COLLAPSE.
* FIT ANY JOB . . . LARGE OR SMALL . . . HOME, BUSINESS, TRAILER, ETC.

Remember!

The few minutes you spend to install a GF is *profitable* time for years to come . . .

- Easy cartridge replacements each season.
- No more troublesome service "call-backs."
- Satisfied fuel oil customers year 'round.

CLEAN RIGHT SOOT REMOVER

cleans any heating system quickly, safely — leaves no residue. Manufactured for General Filters, Inc.

General Filters carry this Underwriters' Laboratories Seal

GENERAL FILTERS INCORPORATED — GENERAL FUEL OIL FILTERS — 12890 WESTWOOD AVENUE, DETROIT 23, MICHIGAN

CANADIAN FACTORY BRANCH: CANADIAN GENERAL FILTERS, LTD., 2679 DANFORTH AVENUE, TORONTO 13, ONTARIO

Here is real down-to-earth help on YOUR service problems!

A Service Saver Plan for Oil Burner Dealers





Meet Us at the Show!

Be sure to visit the

WEBSTER ELECTRIC BOOTH 2-239 at the INTERNATIONAL HEATING & VENTILATING EXPOSITION

International Amphitheater • Chicago

January 26-30, 1953

Within the next 90 days, a new series of the now famous Webster Electric "Service Saver" meetings will be held for the benefit of all who distribute, sell and/or service Webster Electric Fuel-units and Ignition Transformers.

Several thousand oil heating dealers saw and profited from the showing of the original "Service Saver" Program in 1952 . . . thousands more are now going to have the opportunity of seeing the new, revised plan with even more service shortcuts and time-saving ideas. The step by step procedure for handling a "no heat" service call alone shows how to save many hours of needless work. These "Service Saver" meetings will be conducted by expert Webster Electric factory representatives under the auspices of Webster Electric Authorized Service Stations for dealers and their service personnel. Similar meetings for wholesaler groups will be held in key cities over the country.

Write for Date of Your Meeting

Dealers: **Write your nearest Webster Electric Authorized Service Station.**

Wholesalers: **Write direct to Webster Electric Company, Racine, Wisconsin.**

Webster Electric Company, Racine, Wis. • Est. 1909

WEBSTER ELECTRIC

RACINE • WISCONSIN

"Where Quality is a Responsibility and Fair Dealing an Obligation"



Write today for your copy of the new 1953 Ohio Valley Catalog. It shows list prices and describes Ohio Valley's complete line of fine furnace fittings, made from prime-quality, full-gauge, galvanized steel. The Ohio Valley Catalog can be your valuable aid in stocking the best furnace fittings for faster installations at less cost.

CARRIED IN STOCK
BY LEADING WHOLESALERS

To receive your copy of the 1953 Ohio Valley Furnace Fittings Catalog, just mail a card to

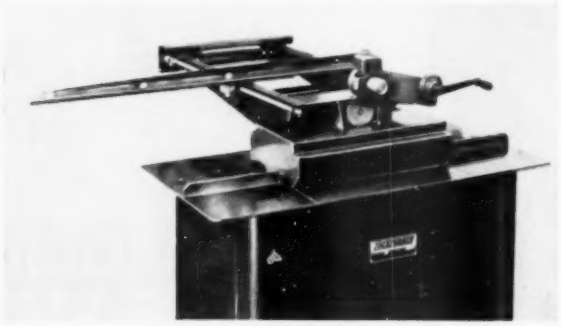


Ohio Valley Hardware & Roofing Company
METAL MANUFACTURING DIVISION, EVANSVILLE, IND.

(Continued from Page 231)

Sheet Metal Slitting Attachment

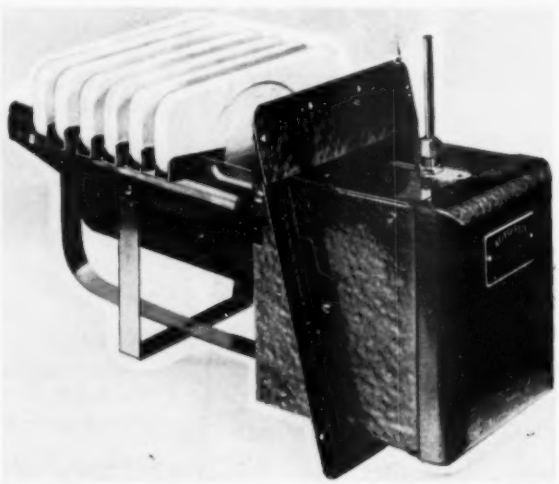
SLITTING ATTACHMENT designed to provide power shearing for sheet metal of 20 gage or lighter, handling any length from 1 in. to infinity, and holding a tolerance of 1/32 in. on an 8 ft sheet — The Lockformer Co., Chicago. It is equipped with a mechanically operated back gage which is always parallel to the shear line. It



will shear a minimum of 1/8 in. from a sheet, or the guide can be set as far back as 24 in. so that slitting can be handled on materials as wide as 18 in. The attachment fits the company's Models 20, 22, and 24 (portable). It can be installed in about 10 minutes, the company states. AA 9

Humidifier with Drain Clips

AUTOMATIC HUMIDIFIERS with stainless steel drain clips



as standard equipment — The Auto-Flo Corp., Detroit. The clips prevent evaporator plates from dripping, according to the manufacturer. AA 10

Vented Wall Heaters

MODEL 1801 gas-fired vented wall heaters in single or dual wall types, with 28,000 and 50,000 Btu inputs, respectively — Rheem Mfg. Co., New York. They are used with natural, manufactured, mixed and LP gases, and are designed for installation between standard wall studding. Features include all-steel electrically welded

DEAL with DETROIT

and Step-up Your Profits with this

PERFORMANCE PROVEN PACKAGE

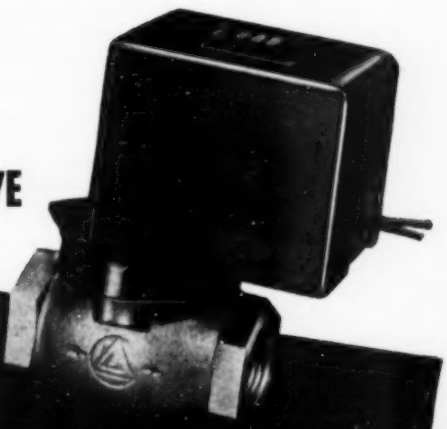
DETROIT

TIMED CYCLING THERMOSTAT and "BI-FLEX" GAS VALVE



DETROIT No. 411-CH Timed Cycling Thermostat

- Timed Cycling—accurate temperature control
- One heater for all jobs
- On the job cycling adjustment
- Easily installed



DETROIT No. V-579 "Bi-flex" Gas Valve

- Quiet operation—at low cost
- Power to open—power to close
- One valve for all gases
- Rugged compact design
- Easy to service

The DETROIT *Timed Cycling* Thermostat and "Bi-flex" Gas Valve are superior products which are a natural combination. That's because each product is the last word in performance—*Timed Cycling* for steady pin-point temperature control—"Bi-flex" operation for quiet, efficient and dependable service.

That's why it will pay you big dividends in customer goodwill and extra profits to install these outstanding products on *all* your new installations and modernization jobs. You'll find they make your job simpler because the DETROIT *Timed Cycling* Thermostat and "Bi-flex" Gas Valve are designed for quick and easy installation.

Timed Cycling eliminates the need of selecting a special heater, because *one* heater is suitable for all jobs. See your DETROIT wholesaler today.

ESTABLISHED AS DETROIT LUBRICATOR COMPANY IN 1877

DETROIT-Controls CORPORATION

5900 TRUMBULL AVE. • DETROIT 8, MICHIGAN • Division of American Radiator & Standard Sanitary Corporation

Representatives in Principal Cities • Canadian Representatives in Montreal, Toronto, Winnipeg—Railway & Engineering Specialties, Ltd.

AUTOMATIC CONTROLS for REFRIGERATION • AIR CONDITIONING • DOMESTIC HEATING • AVIATION
TRANSPORTATION • HOME APPLIANCES • INDUSTRIAL USES

Serving home and industry with AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS & WALL TILE • DETROIT CONTROLS • KEWANEE BOILERS • ROSS HEATER

FOR YOUR BEST LURE...

Choose PAYNE, the Greatest Name in Heating

Only the **PAYNE** line gives you all these money-making features:

1. Priced right to sell – in tracts, projects, or mansions.
2. Complete new furnace line.
3. Highest profit.
4. Guaranteed quality.
5. Built for easiest installation.
6. Designed for easiest service.
7. Outstanding advertising and sales promotion to back up your selling efforts.

PAYNE *offers a complete new 1953 line of gravity and forced air designs for closet, attic, floor, wall, basement or crawl space installation. For descriptive literature – for the name of your local distributor – write*

Payne FURNACE
MONROVIA, CALIFORNIA

A Division of Affiliated Gas Equipment, Inc., Monrovia, Calif.; Cleveland, Ohio; Tyler, Texas; Indianapolis, Indiana.



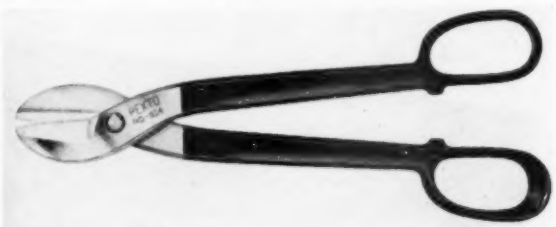
heating elements of thermal fin design, built-in draft diverters, enclosed controls and Fiberglas insulated casings which are 17 in. wide, 60 in. high, and project 5 in. from the wall. AA 11

Tape for Joining Ducts

SCOTCH BRAND plastic film tape No. 472 for joining air ducts and sealing the joints — Minnesota Mining and Mfg. Co., St. Paul. The method has been introduced in the Southwest and approved by federal and local officials, the company states. It is designed to eliminate such operations as drilling holes in each duct, securing the ducts with set screws, coating the joint with wheat paste and wrapping it with asbestos paper. The tape resists humidity changes and reduces the amount of popping noise in ductwork since expansion and contraction can take place without pressure on the ducts' sides. It is applicable for round, square or flexible metal ducts. AA 12

Pattern Snips

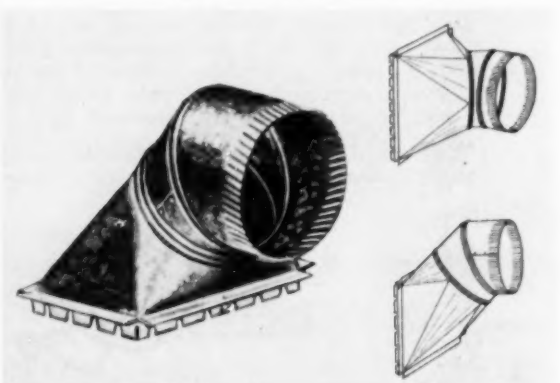
No. 514 PEXTO Bulldog pattern snips — The Peck, Stow & Wilcox Co., Southington, Conn. It features cam action,



short fulcrum blades, full cut with normal hand opening, cutting edges which are electrically heat-treated, and combination pattern. Overall length is 16 in., 2¼ in. cut. AA 13

Adjustable Take-Off

UNIVERSAL ADJUSTABLE take-off, designed to speed up installation and to replace three separate types of take-off — Adelta Mfg. Co., Philadelphia. The take-off is



suitable for a 4 in. small pipe perimeter warm air heating system, and can be adjusted through 360 deg to form a top, side or plenum take-off. It is provided with pre-notched collar edges. AA 14



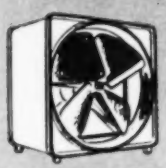
REX-AIRATE Airzip



REX-AIRATE Airtrol



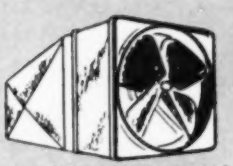
REX-AIRATE Headliner



REX-AIRATE Airliner



REX-AIRATE Clipper



REX-AIRATE Attic-Pak



REX-AIRATE Airburst

The Full Line of Fans for Your Year-Around Plans

Here's a complete line of fans that gives you everything you need for year-around sales—the Rex AIRATE line for summer cooling—the Rex AIR PAK line for winter comfort.

There are air-intake and exhaust fans—circulating, ventilating, window, attic, roof and furnace fans—for both summer and winter air conditioning. And—there are models to meet your every need in every kind of space—from a single room to an entire building.

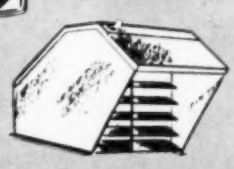
The complete AIR CONTROLS line is modern, efficient and economical—backed by forty-five years of engineering advancement and customer satisfaction. *For product, performance, price and profit—for year-around sales, you can't stock a better line!*

WRITE TODAY FOR COMPLETE DETAILS

AIR CONTROLS, INC.

***Division of* THE CLEVELAND HEATER CO.**

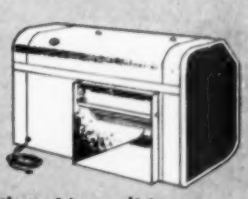
2310 Superior Avenue • Cleveland, Ohio



REX-AIRATE Sky Breeze







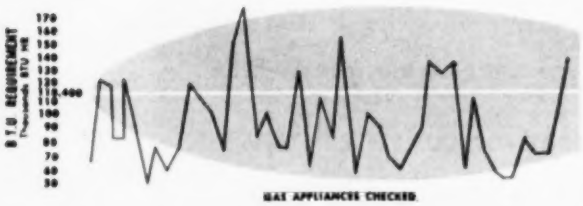
REX AIR-PAK Year Around Blower-Filter Airconditioners

CHECK THIS FOR SIZE



Greater BTU capacity per size, extremely accurate pressure control plus a lower cost unit are outstanding advantages of Thermac Regulators Take the new ½" "T" Series for example. This regulator with a capacity of 118,400 BTU measures only 3-9/16" in width. Other sizes are proportional ranging in capacity from 9000 to 1,398,600 BTU.

Scores of appliances produced by American manufacturers as charted below actually determined the specific sizes of our various models. In other words, we built a regulator to meet appliance requirements, something seldom done.



The octagonal shape makes installations in tight spots a cinch. We have also added vise grip bosses to aid assembly. Then too, the cover vent may be tapped to receive your particular connection thereby eliminating need for extra fittings. In the new "T" series you have a small regulator with more capacity at a lower price plus a lower installed cost. Send today for new illustrated literature.

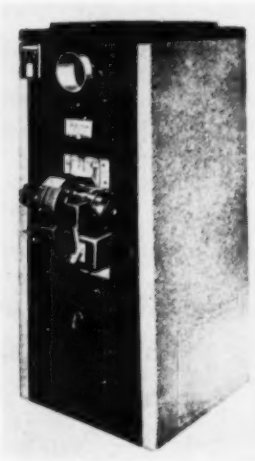


THERMAC
HM COMPANY

"Over 20 years' experience in building gas controls"

Highboy Winter Conditioner

SERIES 531 oil-fired highboy winter air conditioners with ratings of 70,000 and 100,000 Btu — Thatcher Furnace Co., Garwood, N. J. A special feature is the horizontal baffle which provides an additional flue passage for lower stack temperatures. The oversize blower is designed to overcome higher static pressures when the unit is used in conjunction with a cooling coil. Cabinet design permits interchanging of the burner with any other unit of the company. AA 15



Conditioner



Notcher

Power Notcher

DI-ACRO POWER MACHINE for notching sheet material — O'Neil-Irwin Mfg. Co., Lake City, Minn. It is designed to make notches as large as 6 x 6 in. in 16 gage sheet steel, and both larger and smaller than 90 deg, as well as to perform various straight shearing jobs after some adjustments are made. Features include an operating rate of up to 180 strokes per minute, foot-actuated clutch, flywheel driven by single or three-phase ½ hp electric motor, steel housing for all moving parts, and 12 x 18 in. work table. AA 16

Combustion Head

COMBUSTION HEAD (applicable to any burner up to a capacity of 3 gph) designed to produce a sunflower flame or to be adjustable to a different type of flame which will correct any existing pulsating condition — The Boston Machine Works Co., Lynn, Mass. The anti-pulsating flame is also a high efficiency flame, the company states. The combustion head will be exhibited at the 11th International Heating and Ventilating Exposition, Chicago, January 26 to 30. AA 17

Ratcheting Socket Wrench

RATCHETING SOCKET WRENCH for hard-to-reach repair jobs on heating and cooling equipment — Tubing Appliance Co., Los Angeles. It is open ended, permitting the introduction (from any side) of the socket over and completely around a pipe or tube and straight down on the fitting. There the socket engages the nut or bolt and

JOHN ZINK

HEATMAKERS *for All* DOMESTIC HEATING NEEDS



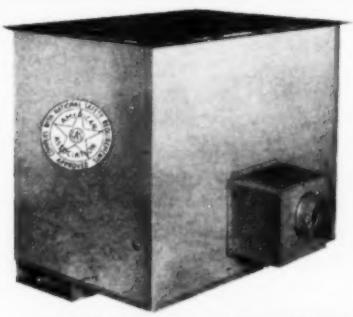
WALL HEATER

John Zink's new WH-25 Recessed Wall Heater fits standard 2" x 4" stud partitions on 16" stud centers, is barely 58" high. Attractive modern design and finish. Available in standard and radiant styles.

CENTRAL HEATER

John Zink Central Gas Heaters are available in Vertical or Horizontal Forced air models. Suitable for installation in attic, closet, basement, utility room, under the floor, or as a suspended heater. Attractively finished.





FLOOR FURNACE

John Zink Gas Fired floor furnaces are available in 5 conventional and short models with input ratings from 30,000 b.t.u./hr. to 85,000 b.t.u./hr. When equipped with safety pilot and automatic temperature control they are a complete heating plant in a package.

STREAMLINED LUMINOUS FLAME



CONVERSION BURNER

Easy to install. Operates manually or automatically. Burns clean fuel—natural, mixed, manufactured or LP gases — without soot or smoke. Luminous flame radiates heat two to three times faster than a blue flame. Four sizes available for either vertical or horizontal firing.

Write for Literature

JOHN ZINK COMPANY

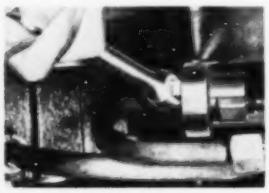
6401 SOUTH PEORIA TULSA 1, OKLAHOMA

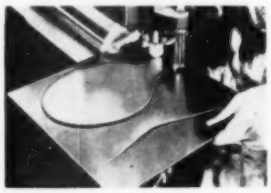
BE
SURE TO
VISIT US AT
BOOTH
1107-1109
INTERNATIONAL
HEATING AND VENTILATING
EXPOSITION
Chicago - January 26 to 30, 1953
DEPENDABLE Controls
FOR OIL . . . GAS . . . REFRIGERATION
A-P CONTROLS CORPORATION
Milwaukee • Wisconsin


OUR
ELBOWS
HAVE
PERFECT
FORM
CONDUCTOR PIPE ELBOWS
AND SHOES
• All Sizes • All Angles
• All Metals • All Gauges
SEE YOUR
JOBBER

The CINCINNATI
ELBOW CO.
2021 EASTERN AVE.
CINCINNATI 2, OHIO

ratchets it off or on. It hand ratchets by means of internal pawls, which act upon teeth cut into a strong ring which travels in a circular channel around the wrench head. As little as 7 deg clearance for the regulation square drive handle permits normal functioning, without the danger of bending the tube or fitting, the manufacturer states. Thin walled sockets are available in a range from 3/8 to 4 in., in 1/16 in. increments in 64 sizes, making the wrench a universal tool which can do the work of an open end adjustable, box, socket and ratchet wrench. Adaptors provide for greater versatility and include: a turnbuckle, hex, square drive, rigid head, screwdriver, Allen head, spanner, and push rod housing. AA 18


Socket Wrench


Shear

Contour Shear

TRU-EDGE contour shear designed for inside cutting, beading and forming sheet steel — Wales-Strippit Corp., North Tonawanda, N. Y. A new shearing principle is intended to eliminate resistance to feeding and turning of the work. In addition, feeding of material may be started while the ram is operating. Inside cutting requires no starting holes, eliminating preliminary operations, the company states. The shear cuts from 10 to 36 fpm, depending on gage and material. Capacity is up to 10 gage mild steel and 11 gage stainless. Throat depth, 48 in., can be increased by arranging centers outside the throat. AA 19

Flux for Metal Soldering

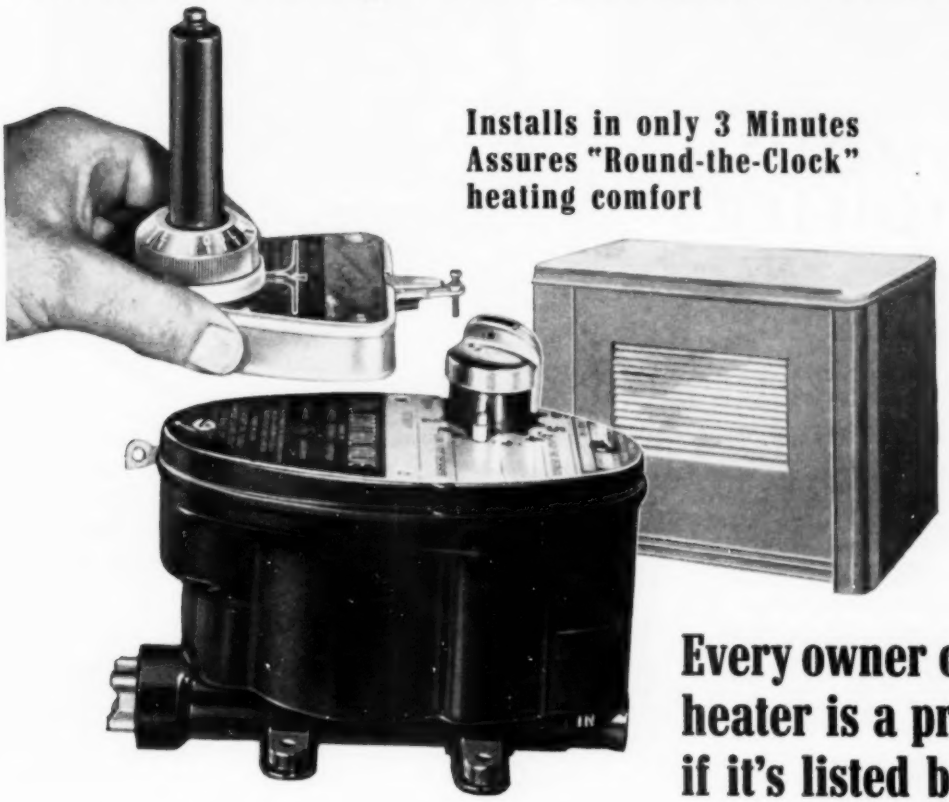
ALL-PURPOSE flux developed for rapid soldering of a wide variety of different metals — London Chemical Co., Chicago. It may be used on brass, bronze, steel, galvanized iron, tin, zinc, etc., and many alloys. The wetting properties of the flux enable it to penetrate drawing, cutting, and lubricating oils and to form a good bond deep into cracks and corners, where soldering is normally difficult, the company states. AA 20

Room Air Conditioners

1953 LINE of room air conditioners includes two new window units, Deluxe models in sizes of 3/4 and 1 hp — Remington Air Conditioning Div., Remington Corp., Auburn, N. Y. Models are equipped with the Climate Compensator, which provides additional dehumidification for warm humid days and added cooling for extra hot weather. An automatic thermostat control is standard in these models. A single master control knob offers high-low fan speed choice when the unit is operated for ventilation and re-circulation only. The twin grilles of the 3/4 hp unit provide a 16 directional air pattern. The

NOW...Automatic Heat Control

...with no wiring...no thermostat...and only $12.95*



Installs in only 3 Minutes
Assures "Round-the-Clock" heating comfort

** In Canada $15.95 including Canadian tax*

Every owner of a space heater is a prospect... if it's listed below

HERE'S an automatic heat control for space heaters that's a REAL "hot number!" It's the revolutionary new A-P Comfort Control for oil burning space heaters that's so downright low in price no owner can afford to be without it. And it's so easy to install that anyone can attach it on any of the famous brand space heaters listed at right. Then — set the dial and presto — warm, comfortable heat with no peaks, no valleys!

Your customers can enjoy all the convenience of automatic, dial-controlled heat — plus its fuel-saving economies.

This accessory has "caught on quick" with smart merchandisers — who realize what a powerful help it is in selling space heaters.

There's a big selling season ahead. It's your prime opportunity for more sales . . . added profits. Show it . . . demonstrate it . . . and you'll sell it. Write today for full details.

DEPENDABLE Controls

This great new merchandising campaign helps you sell space heaters



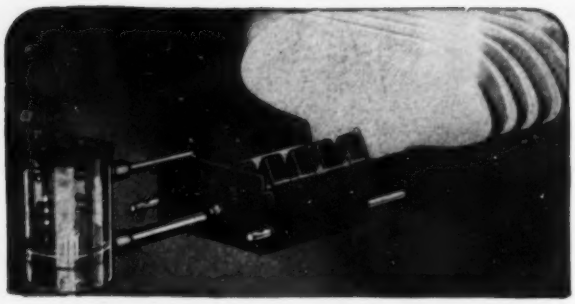
Complete Profit-Maker kit is yours for the asking. Displays, stickers, folders, ad mats — everything you need to sell this great accessory. Send for your Profit-Maker kit *today!*

EASILY INSTALLED ON ANY OF THESE FAMOUS BRANDS

ALLEN'S
BARNES
BENNER-NAWMAN
BEYER
COLE HOT BLAST
COLEMAN
COLEMAN *(Canada)*
CREST *(Canada)*
CREST-AIRE *(Canada)*
CUSTOM AIRE
DOMESTIC
DRACO FIREBALL
DUO-THERM
ENTERPRISE
ENTERPRISE *(Canada)*
ESTATE HEATROLA
EVANS
EVEN-TEMP
FAWCETT TORRID-OIL *(Canada)*
FESS *(Canada)*
FINDLAY *(Canada)*
FLOOR-O-LATOR
FLORENCE
GILLEN
H. C. LITTLE
HERCO HEAT FLO *(Canada)*
INTERNATIONAL
JUNGERS
KEMAC *(Canada)*
KLEER-KLEEN
LACO
LONERGAN
MAGIC CHEF
MARCHAND *(Canada)*
MONARCH
MONARCH *(Canada)*
MONOGRAM
NESCO
NORGE HEAT
ORAN
PERFECTION
PREWAY
QUAKER
QUAKER *(Canada)*
SAFEWAY
SCOTSMAN
SIEGLER
SILENT FLAME
SUPERFLAME
THARRINGTON
THERMO-PRODUCTS
TORRIDAIRE
VIKIMATIC
WASHINGTON FRUGAL

A-P CONTROLS CORPORATION

2152 N. 32nd St., Milwaukee 45, Wis. • In Canada: A-P Controls Corp., Ltd., Cooksville, Ont.



MONMOUTH HUMIDIFIERS

The Extra Sale that will Bring YOU Better Profits in 1953

You will be doing a favor to every furnace user you serve — every new furnace buyer — and to yourself — if you resolve now to push the sale of Monmouth Humidifiers in 1953.

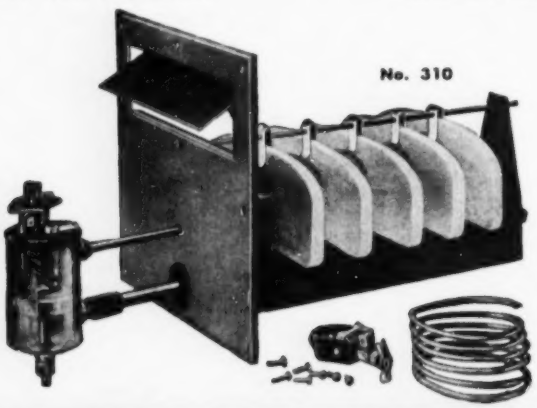
Simply point out to home owners that dry air is harmful to health — that it dries out furniture, plaster and woodwork — causes costly repairs — and it isn't difficult to make a Monmouth sale. Nor is it hard to install — takes little time — yet pays you big profits.

Monmouth Humidifiers come to you packaged — in 16 sizes that take care of furnaces up to 420,000 B.T.U. — in two styles with time-tested Flotrol or Microfeed control — and in a special Humidity Control Unit for use with radiation heat. All employ the exclusive Monite plate for fast vapor diffusion.

Resolve now to let Monmouth help you make more money in 1953. Write today for descriptive bulletin and size, price and discount sheet.

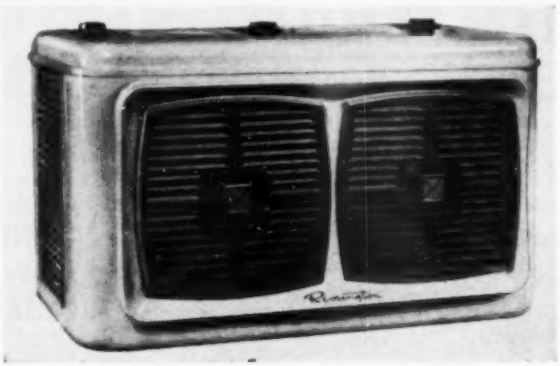
THE CLEVELAND HUMIDIFIER CO.

7802 Wade Park Avenue — Cleveland 3, Ohio



MONMOUTH HUMIDIFIERS

line continues to feature 1 and 1½ hp console units, which have been named The Director and The Overton,



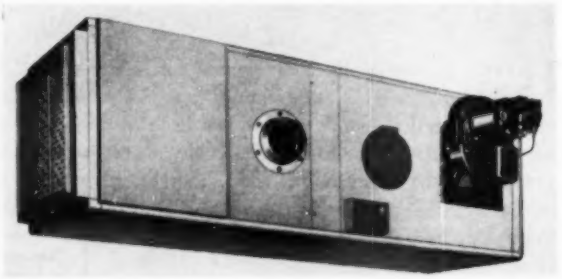
respectively. Also available are water-cooled consoles and other models of window units. AA 21

Oil Burner

MODEL N4G oil burner, designed for larger capacity and greater operating efficiency than the Model 4G, which it replaces — Radiant Utilities Corp., Brooklyn. It has a capacity of 15 to 30 gal and contains a flange-mounted ½ hp motor with overload switch and twin ignition consisting of two transformers. There is a pyrex glass in the backplate. The model has a one-piece, machined housing. AA 22

Horizontal Furnace

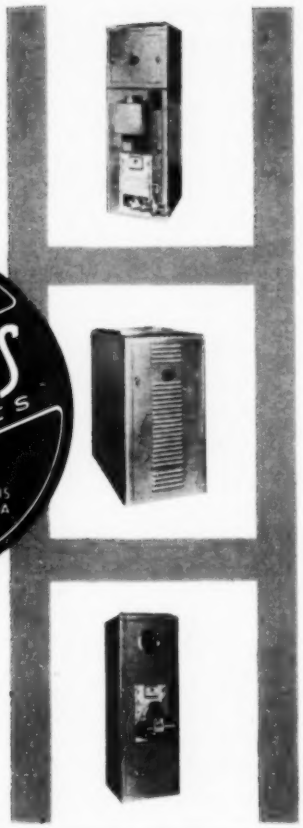
OIL-FIRED horizontal furnace available with a 112,000 Btu output rating, with additional sizes to follow — C. A. Olsen Mfg. Co., Elyria, Ohio. It can be suspended from ceilings, set on joists, hung from attic rafters, or installed in closets or in crawl spaces. The gas-tight



steel heating element can be cleaned without lowering the unit or removing the casing. The Luxaire gun type oil burner which burns commercial and catalytic cracked oils is standard equipment. AA 23

Fuel Unit Valve

VALVE ASSEMBLY, available in single and two-stage fuel units, is intended to be immune to deterioration beyond normal operating conditions and to eliminate nozzle drip — Webster Electric Co., Racine. The assembly consists of a crown-shaped stainless steel valve seat and a valve containing a special plastic disc which is designed to "swallow" metal particles and other foreign matter. The valve is a part of the 6000 Series fuel units. AA 24



PEERLESS FURNACE AND FOUNDRY INC
PEERLESS FURNACES
INDIANAPOLIS INDIANA

You can make 1953 a better and more profitable year with these completely NEW VERSAT-ALL Winter Air Conditioning Units—designed to burn either oil or gas.

A.G.A. APPROVED for *all types* of gas, these units are available in Hiboy (up-flow or down-flow) and in Basement sizes to meet any residential heating requirement.

VERSAT-ALL
WINTER
AIR CONDITIONING UNITS

See the improved design and dimensions of the VERSAT-ALL heat exchangers. See the NEW VERSAT-ALL gas burner that is A.G.A. APPROVED for *all types* of gas.

In 1953 these VERSAT-ALL units will help you reduce inventories, improve your service to customers and make each job deliver its full profit—PLUS enthusiastic customer satisfaction. You'll see.

Write, wire or 'phone

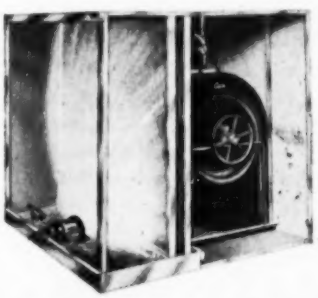
PEERLESS
FURNACE AND FOUNDRY, INC.
1853 Ludlow Ave. Phone: IMperial 3431
Indianapolis 7, Indiana

ALTON AIR WASHERS

VALUABLE SALES OPPORTUNITIES

There are many choice sales opportunities available for qualified dealers who have the vision and imagination to see the huge profit line with ALTON — AIR WASHER — EVAPORATIVE COOLERS

ALTON installations have proven themselves all over the country and the increasing demand for ALTON gives YOU an opportunity to offer quality — at prices that sell.



For Installation In. . .

Churches	**Cafes**	**Factories**	**Mortuaries**	**Retail Stores**	**Taverns**
Bowling Alleys	**Bakeries**	**Super Markets**	**Theaters**	**Night Clubs**	**Beauty Shops**

SIZES
4000 CFM
5500 CFM
7000 CFM
10000 CFM
12000 CFM
Now Ready to Ship!

If you will fill in the coupon below, we shall be glad to lay the facts before you and explain how YOU can sweep in the early profits that to-day lie waiting in every city, village, town and hamlet in the country.

ALTON
1112 Ross Ave.
DALLAS, TEX.

Please send complete information about the new Alton.

Name_____
Address_____
City_____ State_____



simple
assembly
.
.
.
low cost

PARKER-KALON Jiffy
DAMPER REGULATOR

Developed to meet a demand for a low cost device for domestic air conditioning and furnace installations, the P-K* "JIFFY" Regulator incorporates such desirable features as: (1) Slip on attachment; (2) Wing-nut locking; (3) Rattle-proof fastening; (4) Lever, attached parallel to damper, instantly indicates position in duct; (5) Easy mounting on round or flat surfaces; (6) Formed of heavy gauge steel, cadmium plated to resist corrosion.

Also available from your P-K Distributor . . . the popular leakproof, rattleproof "DIAL" Regulator, and for heavy duty, the "UNXLD" Quadrant. Remember . . . IF IT'S P-K . . . IT'S O.K.

PARKER-KALON*
DAMPER CONTROLS

Makers of the Original Self-tapping Screws



Write for free folder

Describes all types and sizes of P-K Damper Controls. Tells why leading contractors everywhere prefer them. Parker-Kalon Corporation, 200 Varick Street, New York 14, N. Y.

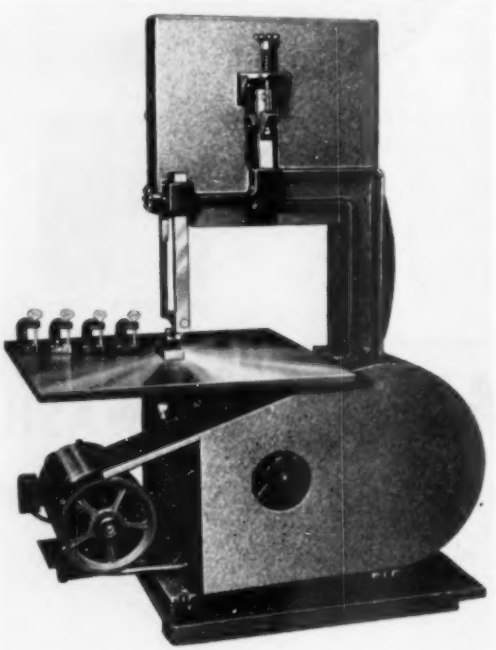
*TRADE MARKS REG. U.S. PAT. OFF.

Heating Units

LINE OF OIL-FIRED highboy, lowboy, and suspended units — De Soto Oil Burner Co., York, Pa. Three highboy models range in capacity from 78,000 to 110,000 Btu per hr at the plenum. For the two suspended models, ratings are 75,000 and 110,000 Btu per hr at the plenum, and for the lowboy, 93,000 Btu per hr. The highboy is also built as a counterflow unit and specifically designed for one floor basementless houses of slab floor construction using perimeter heating duct system, or for crawl spaces. AA 25

Sheet Metal Saw

IMPROVED, heavier, Model 14 MS sheet metal saw with floor-to-top all-cast frame, simplified, adjustable motor mount and fully enclosed blades and wheels — Bett-Marr Mfg. Co., Hopkins, Minn. It is designed to cut



50 to 70 stacked galvanized sheets at speeds up to 15 in. per minute. The model is a 14 in. ball-bearing band saw with blade speeds (125 to 2200 fpm) adaptable to cutting metal, iron and steel castings, and forgings. The saw is designed for intricate cutting jobs encountered in ductwork fittings. The 20 x 22 in. table permits handling of large work. Case hardened guides with carbide backup bearing (adjustable up to ½ in. blade width) are designed to assure positive blade control and cutting accuracy. AA 26

Baseboard Register

NEW MODEL baseboard register, featuring a 4 in. length, in addition to the standard 8 in. size — Vectaire Mfg. Co., Melrose, Mass. A paint-drip guard is now mounted on the reverse side of the front panel, permitting the assembled unit to be painted on the job. 1/16 in. paint clearance bosses, giving positive clearance between the

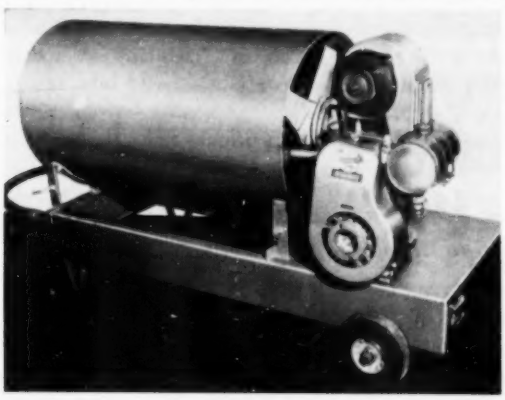
shutter and the front panel, are intended to prevent finish paint from being marred when the shutter is operated. A new longer lock-button, a stiffer shutter, and a new operating lever also are featured. The lever permits operation of the shutter from left, right, or center positions. Also available is a special stack boot with built-in turning vanes, which permits the air to be piped directly into the bottom of the baseboard. AA 27

Gas-Fired Wall Heaters

GAS-FIRED wall heaters which permit the installer the choice of up to 24 different combinations to solve a maximum variety of heating problems — Coleman Co., Wichita. There are six basic models, four of them single-wall and two dual-wall, with input ratings of 25,000 to 55,000 Btu. Their combinations can be varied with such features as a new, three-speed Directionair blower, rear register and Economizer grille and stack assembly. The blower is optional. All models are adaptable to natural, manufactured, LP and mixed gases. They fit between standard 16 in. on center wall studs and extend 4 in. into the room. AA 28

Portable Space Heater

PORTABLE SPACE HEATER with motor driven by a small gasoline engine — Quiet Automatic Oil Burner Corp., Newark, N. J. This feature is designed to increase versatility of the unit, because it can be used in build-



ings under construction where electricity is not available. The heater illustrated is available in two sizes, rated at 200,000 and 400,000 Btu. A connection line to an oil drum supplies fuel. A stack is not required. Instantaneous starting of the burner is assured, according to the company. AA 29

Hole Punching Units

TYPE CJ hole punching units with a new design feature providing a positive die retainer and a simplified interchangeable die removal method — Wales-Strippit Corp., North Tonawanda, N. Y. The interchangeable dies slip-fit in the holders and are fastened into position by a threaded pilot pin which is tightened or removed with a hex wrench. Units consist of a holder which carries the punch, die and stripping mechanism. This self-contained design is intended to eliminate the need for at-

try the simpler way— just use P-K hardened



MASONRY NAILS

for making fastenings to brick, mortar, concrete, etc.



You'll save work, as well as time and money by using P-K* Hardened Masonry Nails. Just hammer them in — they hold securely, and are easier, quicker, and cheaper to use than expansion bolts, lead anchors and plugs, and similar devices.

In comparatively soft masonry they can be driven without the necessity of drilling lead holes. For hard masonry, make pilot holes with a P-K Masonry Drill.

First time you try them, you'll agree that P-K Masonry Nails are the job-speeders you've been looking for. Available everywhere through accredited Distributors. Remember . . . IF IT'S P-K, IT'S O.K.

PARKER-KALON*

FASTENING DEVICES

Makers of the Original Self-tapping Screws



Write for this folder

Gives sizes, punch information, full instructions for use. Tells you the many ways Masonry Nails will help you save time and money. Parker-Kalon Corporation, 200 Varick Street, New York 14, N. Y.

*TRADE MARKS REG. U.S. PAT. OFF.

LICK COMBUSTION TROUBLES without shutting down the heating plant!



Patents Pending

Most combustion troubles—pulsating, sooting, puffing of oil-fired, units . . . . condensation and wet chimneys with gas-fired heating plants . . . puffing, sooting, clogging of coal-fired furnaces—are due to inefficient draft.

Cause may be a cold chimney, "short" chimney, bends in the chimney, long smoke pipe or elbows in the smoke pipe. Even if conditions are ideal, full natural draft to support *complete* combustion and carry away *all* troublesome combustion products is not established until the chimney is warmed up.

Quickdraft corrects this condition immediately by creating full draft when firing begins. It operates through the firing period yet does not "build up" excessive draft. There are no obstructions in the smoke pipe.

Quickdraft is as simple and easy to install as a length of smoke pipe which it replaces . . . can be installed between firing periods on oil or gas-fired plants . . . when the fire is down in coal-fired furnaces. Quickdraft can be wired after the unit is in place.

Quickdraft is reasonably priced, simple, foolproof . . . built for long service.

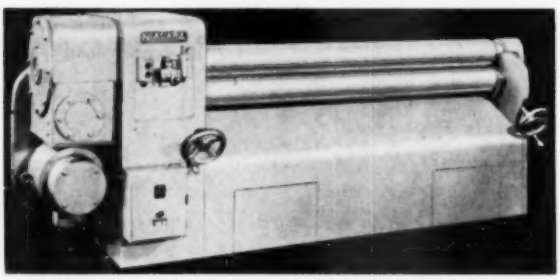
Thousands of homes in your area need Quickdraft for efficient trouble-free heating. Cash in on this ready-made market. Write or wire for details.

quickdraft
COMPANY
1640-D Cleveland Ave., NW, Canton 3, Ohio
DIVISION OF THE HALL'S SAFE COMPANY, INC.

taching the punch to a press ram and to assure permanent alignment of punch and die. Set-ups are made on T-slotted plates or templates for stamping presses, and on T-slotted plates, rails or strip templates in press brakes. When the set-up is placed on the press bed, punching can be started without adjustment of the units, punches or dies, according to the company. The units are available in three holder widths with maximum punch diameter of ¾ in. for use with metal up to ¼ in. thick. AA 30

All-Steel Bending Rolls

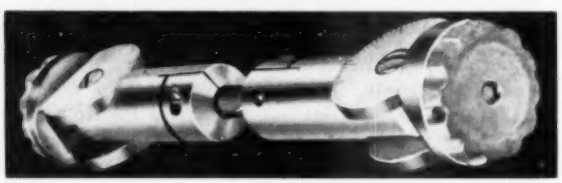
ALL-STEEL bending rolls designed to produce commercially true cylinders from thinnest sheets to maximum capacity and to roll a multitude of bends in various shapes, including oval forms, rectangular pipes, rounded end containers and cones — Niagara Machine & Tool Works, Buffalo. They are of pinch type construction



intended to reduce flat spots on the leading and trailing edges of the work. As all three rolls are power driven, light gage sheets can be easily formed into small diameters, according to the manufacturer. An air operated drop end is controlled by a two position valve. The rolls are available in capacities of 5/16 x 48 in., 3/16 x 72 in., and 12 gage x 120 in. AA 31

Pattern Developer

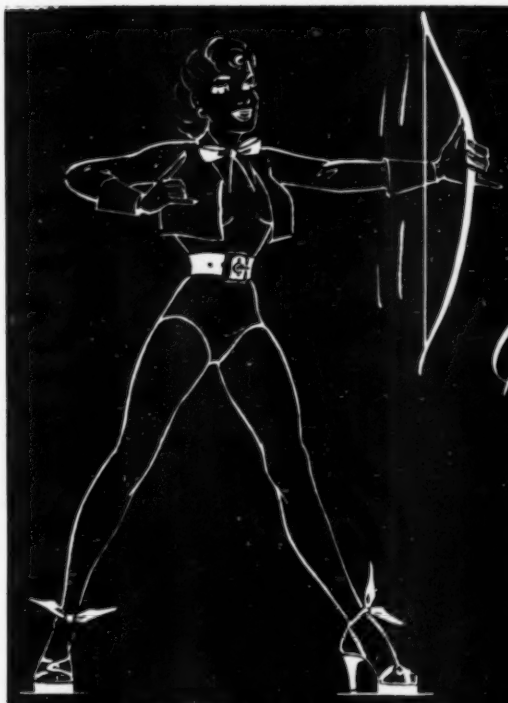
JET PATTERN DEVELOPER for laying out square to rounds, cones, elbows, intersections, pair pants, register booths, dormers (any pitch), transitions, three piece transition-



al elbows round to square, etc. — H. Owens Co., Culver City, Calif. The templates are attached to correspond with the size of the fitting openings, the tool is adjusted for length and curve or offset, and the pattern can then be rolled out. AA 32

Soldering Paste

HY-TIN, a paste containing powdered solder suspended in a scavenger action flux, designed to clean and tin (in the same application) cast iron, stainless steel, monel, cast steel, copper, brass, galvanized and lead coated steel — Farrelloy Co., Philadelphia. AA 33



Exclusive!

"STRAIGHT-THRU-FLOW", the FAMOUS PRINCIPLE ORIGINATED BY MAXITROL GAS PRESSURE REGULATORS

MAXITROL, the first AGA certified mass-produced gas appliance pressure regulator to employ the "Straight-Thru-Flow" construction. This basic change from old style design insures lower pressure drop, greater capacity, smaller size, and better performance.

REMEMBER: For imaginative thinking, for product leadership, for ORIGINALITY—

Maxitrol IS BEST BY FAR!

DETROIT REGULATOR COMPANY

1742 RIVARD STREET — DETROIT 7, MICHIGAN

Sold on the Pacific Coast by: PACIFIC SCIENTIFIC CO., San Francisco, Los Angeles, Seattle, Portland

---

Elgo Ventilating Specialties

FAMOUS AUTOMATIC SHUTTER

Unusually sensitive to air currents, causing the louvers to open instantly when the fan is turned on—and snap shut when the fan is turned off. The aluminum louvers are weather-stripped. The best fitting shutter on the market.

Louver blades have special felt silencing pads. Equipped with improved shoulder rivet.

Sizes from 12" to 72" square — also rectangular.



"ELGO" TYPE AUTOMATIC SHUTTER Front View (Open)

Elgo Shutters Are Distributed Through Fan and Air Conditioning Equipment Manufacturers



All-Steel Motorized Shutter

●

Used for exhaust ventilation in industrial, commercial and residential buildings. Automatically controlled by fan switch. Positive closing. Stormproof. All-steel construction.

Elgo Shutter & Manufacturing Co.
2738 W. WARREN — DETROIT 8, MICH.

Elgo Shutter & Mfg. Co.
2738 W. Warren
Detroit 8, Michigan

Free CATALOG

Please send catalog showing the items checked below:

- Automatic Shutters
- Stationary Shutters
- Hand Operated Shutters
- Ceiling Dampers
- Motorized Ceiling Shutters
- Motorized Shutters

Name .....

Address .....

City ..... State .....

NEW LITERATURE

1-53

For your Convenience to Cut Out and Mail

We will ask the manufacturer to send you the literature described.

Be sure to circle the items which you wish.

101 102 103 104 105 106 107 108 109 110
111 112 113

Name ..... Title .....

Company ....

Street .....

City ..... Zone ..... State .....

Mail to AMERICAN ARTISAN, 6 N. Michigan Ave., Chicago 2, Ill.

Gas Appliance Regulators

LITERATURE CONSISTING of a four-page folder and five bulletins describes in detail a complete line of gas furnace and gas pilot regulators — Thermac Co., Los Angeles. Bulletin 201, the folder, covers the "T" series eight- or 10-sided regulators. Bulletins 202 and 203 describe Models T-11 and T-15 regulators with ½ and ¾ in. line connections. Bulletin 205 describes the Model TROD appliance regulator available in three sizes: ⅜ in., ½ by ⅜ in., and ½ in. Bulletin 206 describes the pilot regulator. The larger gas furnace regulators, Models 34-D, TR-50, TR-60 and TR-70 in sizes of ¾ to 2½ in., are described in Bulletin 207. AA 101

Sheet Metal Products

CATALOG No. 500 (72 pages) covers the Milcor line of rain carrying, heating and roofing products — Inland Steel Products Co., Milwaukee. The catalog is divided into three product sections and indexed alphabetically. All products are fully illustrated. AA 102

Gas-Operated Diaphragm Valve

BULLETIN No. 501 describes the K-100D gas operated diaphragm valve, a remote control valve for use on water heaters and all other appliances where an all gas control valve is desired — Utility Controls Co., Los Angeles. The valve is controlled preferably with snap action valves in the control gas line. AA 103

Power Driven Bending Rolls

BULLETIN 88-A (four pages) describes 6 in. series all steel pinch type bending rolls and illustrates the process of rolling cylinders — Niagara Machine & Tool Works, Buffalo. The main switch controls rotation of rolls in forward and reverse directions. In neutral position, rolls are stopped instantly by a magnetic brake on the motor. Rear roll power adjustment is controlled by a two position switch that raises or lowers rear roll to any position to suit a desired radius of curvature or diameter

PENN VENTILATORS

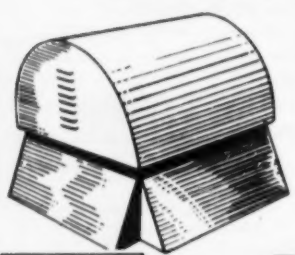
Perform Efficiently . . . Economically!

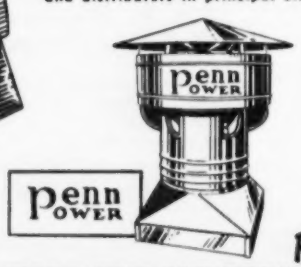


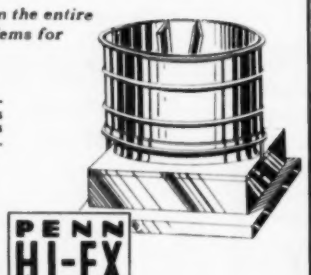
There is a type, size and capacity for all your ventilating requirements. Efficient and economical Penn Ventilators are easily installed and last long, providing years of trouble-free, inexpensive ventilation. They have been removing dust, vapors, smoke, heat, fumes and odors from public, commercial and industrial buildings for more than a quarter of a century.

Write for descriptive literature on the entire line or send us your specific problems for qualified recommendations.

Manufacturers of:
Propeller Fan—Centrifugal Fan, Stationary, Rotary and Ridge Roof Ventilators and accessory products. Representatives and distributors in principal cities.









PENN VENTILATOR CO.
Main Office and Factory
North Goodman St. & Allegheny Ave.
Philadelphia 40, Pa.

FOR MORE THAN 25 YEARS THE BUILDERS' TOP LINE! ROOF

of cylinder. The air operated drop end is controlled by a two position air valve that opens and closes the tail hinge which automatically tips the upper rolls so the rolled cylinder can be easily removed. AA 104

Registers & Grilles

BULLETIN F 4471-1 (four pages) describes a complete line of air distribution products — Barber-Colman Co., Rockford, Ill. Included are illustrations of high velocity air distribution devices, grilles with integral volume control, registers, round and square ceiling outlets and accessories for grilles and registers. AA 105

Hospital Ventilation

GENERAL HOSPITAL ventilating needs are explained, and recommended air changes are listed in Bulletin 1510, entitled *Modern Practices in Hospital Ventilation* — Ilg Electric Ventilating Co., Chicago. AA 106

Gas Fired Floor Furnace

DATA SHEET illustrates and describes the Radaire gas fired warm air floor furnace — Hunt Heater Corp., Nashville, Tenn. The unit is easily installed from above the floor and is shallow in depth, the 50,000 Btu model measuring 24½ in. and the 75,000 Btu model, 31 in. Specifications for both the Deluxe and Standard series are included in the circular. AA 107

Base and Floor Diffusers

CATALOG INSERT (eight pages) covers Models No. 132¼ and 133¾ base diffusers, No. 410 floor diffuser and No. 163¾ out-of-wall base register — United States Register Co., Battle Creek, Mich. The insert is a supplement to the company's current catalog and is a preview of a portion of its No. 53 catalog. AA 108

V Belts

BULLETIN 20B6497A (four pages) illustrates and describes Texrope grommet V belts — Allis-Chalmers Mfg. Co., Milwaukee. The belt is made without a splice, which, according to the manufacturer, provides uniform strength throughout, eliminating weak spots. Other features mentioned are high gripping pressure, cool running and minimum shrinkage and stretch. AA 109

Roofing Supplies

CALENDAR FOR 1953 contains reference tables giving information on physical properties of roofing metals, sizes of drills to be used, slopes of roofs, weights and measures, rules of calculation, etc. — David Levow, 308 W. 20th St., New York 11. Please request the calendar from the manufacturer, on business stationery. AA 110

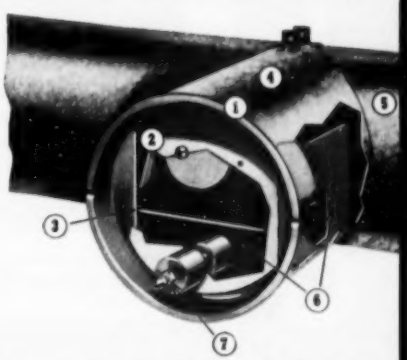
Uses for Aluminum in Architecture

A 28 PAGE booklet, *Welcome to the General Sales Office*, includes several illustrations showing novel architectural uses of aluminum, such as aluminum ductwork, awnings, partitions, etc. — Reynolds Metals Co., Louisville. The publication is designed to orient visitors to the company's new general sales offices. AA 111

HEATING DEALERS

depend on field

FOR TROUBLE-FREE PERFORMANCE



1—MADE OF HEAVY MATERIALS — Field Controls Last Longer.
2—BALANCED AT FACTORY — Eliminating weight variations which could affect control's accuracy.
3 — ROCKER TYPE HINGE PIN — Quickly responsive, no friction. No sticking.
4—LONG COLLAR — No warping or clogging due to heat or soot, no service calls.
5—FREE SMOKE PASSAGE — A Field Control never blocks the flue.
6—SIDE WINGS AND FITTED GATE — More accurate because opening in control increases more uniformly.
7—FACTORY ADJUSTED — Set to maintain .06" draft until instrument setting is made.

The Field Draft Control is quick, easy and simple to install. But far more important it keeps performing without requiring attention itself — no warping, sticking, clogging — and without causing extra service calls due to smoking or fuel waste. And for the customer a Field Control means maximum fuel economy. For every 1/100" of excess draft eliminated, due to Field's greater accuracy, there is up to a 1% fuel savings. Yes, you can depend on Field.

FIELD CONTROL DIVISION
of H. D. Conkey & Company — Mendota, Illinois

AFFILIATES: Conco Building Products, Inc. — Brick, Tile, Stone
Conco Materials Handling Division — Cranes, Hoists

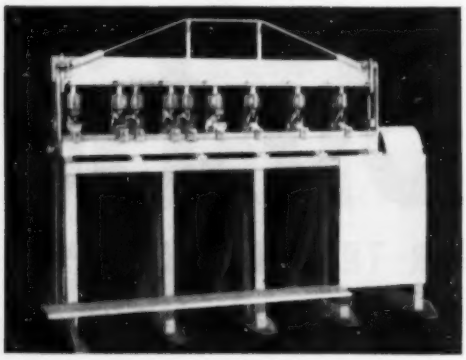
Visit our Booth No. 1024 at the International Heating & Ventilating Show, Chicago January 26-30.



FALLSINGTON

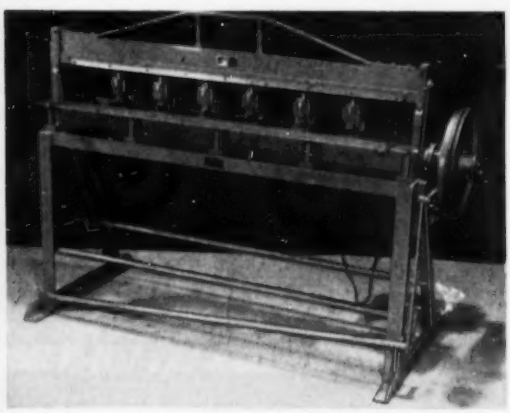
LET FALLSINGTON SOLVE YOUR NOTCHING AND PUNCHING PROBLEMS

We can solve your notching and punching problems with two great machines — the Fallsington "C" Multi-Punching Machine and the A & B Multi-Notcher.



Above the Fallsington "C" Multi-Punching Machine is suitable for aluminum window rail and all types of multiple punching and notching. Dies are movable for entire length of machine and are self contained.

Length of machine, 3 to 6 feet.



Above — the famous Fallsington Multi-Notcher — Power driven. Made in four sizes to accommodate sheets from 18" to 48" in width — ideal for making fittings for duct work, etc.

We also manufacture—Rolling machines—Beaders & crimpers—Pipe Lock Bumping machines —and a line of hand tools—clip punch—drive cleat notchers and omni shears.

FALLSINGTON MANUFACTURING CO.
FALLSINGTON, PA.

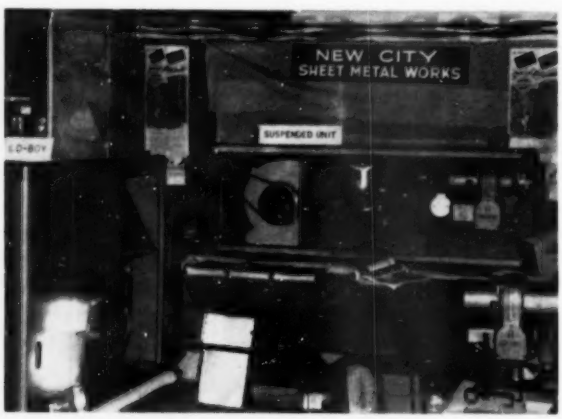
Manufacturers
SHEET METAL MACHINERY & TOOLS

we hear that . . .

THE EXCELSIOR STEEL Furnace Co. held its annual conference for salesmen and division managers last month. Sessions were held on December 9 at the company's Chicago office and its factory, and on December 10 at Holland, Mich., where those attending toured the Hart & Cooley plant. Discussed were the general business outlook and the company's products, including new developments.

THE LURIA ENGINEERING CO. is producing a 24,000 sq ft standardized steel warehouse for D. Loveman & Son Export Corp., to be erected in Bedford Heights, Cuyahoga County, Ohio. The warehouse, scheduled for completion in February, will be a single story, rigid frame structure measuring 120 by 200 ft. It will be equipped with two overhead craneways running the entire length of the building, each with a 10-ton crane load capacity.

THE NEW CITY Sheet Metal Works, Torrington, Conn., which sells Armstrong Furnace Co. products, recently displayed its sheet metal and heating equipment at the Torrington Better Homes Show, held under the sponsorship of the Kiwanis Club. The show boasted an attendance of 10,000. Oliver Marcantonio, owner of the sheet metal firm, reports that an unusually high percentage of the inquiries he received were "turned into sales."



NEW MODEL winter air conditioning units were prominently displayed by the New City Sheet Metal Works in its booth at the Torrington, Conn. Better Homes Show.

FORMAL OPENING of the first unit of a 185-home development in New Rochelle, N. Y., the largest residential community in the east to be fully air conditioned for year 'round comfort, took place recently. The new homes, all to be equipped with Carrier Weathermaker air conditioning units providing cooling in warm months and heating in winter with humidifying control, will be ranch-style and split-level designs. Prices for the two designs will range upward from $26,900. Builder of the homes is Stratton Heights, Inc. All of the homes

SMITH'S CLEAT BENDERS

SOLD SINCE 1940

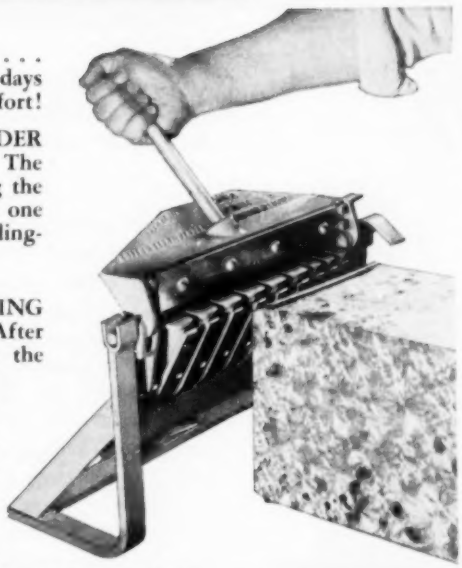
THE COMPLETE
DRIVE-CLEATING BENDER
or Duct and Box Flanger

SAVES WASTED MINUTES! . . . that can add up to hours . . . days . . . and weeks in needless effort!

WORKS LIKE A BAR-FOLDER WITH A NEW TWIST — The slotted mandrel allows entering the end of a square duct so that one side can come under the folding-bar to make a *Cleat Edge*.

The SEQUENCE OF BENDING is similar to a bar-folder — After the edge is positioned under the folding-bar, a bend is made to a sharp angle . . . the bend is released from the folding-bar and then pinched down. There the similarity ends.

With a SMITH'S CLEAT BENDER, swinging the work back and forth has been eliminated, by manipulating the bender instead of the work; so that now a *Cleat Edge* can be made "faster than you can work a *bar-folder*."



BENDS CLEAT EDGES on square duct in less than 5 seconds . . . BENDS DRIVE-CLEATS to join them together in less than 8 seconds. BENDS FLANGES on register boxes and sumilar square shapes.

No time wasting adjustments to make . . . fits any size duct up to width of bender and any thickness up to 20 Ga. (Mild Steel).

TWO SIZES:

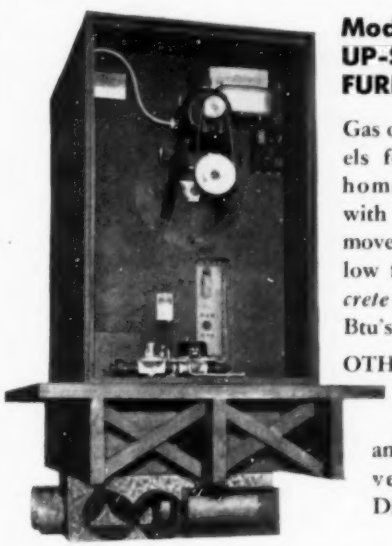
No. 12 SMITH'S CLEAT BENDER
12" wide duct $42.00*
No. 18 SMITH'S CLEAT BENDER
18" wide duct $66.00*
*Prices subject to change
F.O.B. WAUKEGAN, ILL.

STANDARD EQUIPMENT in all duct shops: Air Conditioning — Furnace — Ventilating and Shipyards.

R. E. SMITH

1806 BELVIDERE ST. WAUKEGAN, ILL.

GLASBY . . .



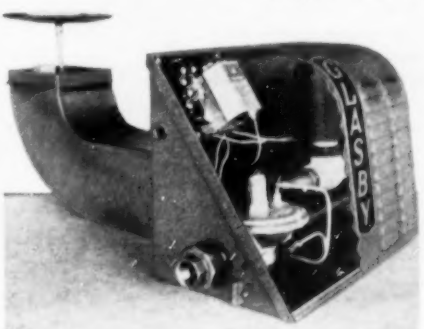
Model No. 65
UP-SIDE-DOWN FURNACE

Gas or oil fired models for basementless homes (illustrated with front panel removed) plenum below floor or in *concrete slab* 95,000 Btu's.

OTHER models Available 100,000 Btu's and over with conventional Top Discharge.

GAS CONVERSION BURNER

Factory Assembled and tested. Push-button pilot lighter and safety switch — two models cover range 85,000 to 300,000 Btu's



J. P. Glasby Mfg. Co., Inc., BELLEVILLE 9, N. J.

You can't beat

Black & Decker power



for



Sanding soldered joints



Grinding welds, shearing bolts



Removing paint and rust

All abrasive jobs *go faster* and *look better* when you do them with a Black & Decker Portable Sander! B&D Sanders are fully powered with B&D-built universal motors and feature spiral bevel gears of heat-treated alloy and grease sealed ball bearings. Entire mechanism is enclosed for protection against abrasive dust. Reversible side handles assure perfect balance and ease of handling on all jobs. 4 models in 7" and 9" disc diameters. See your nearby B&D distributor for a demonstration of these and other B&D portable electric tools. Or, write for free catalog to: The Black & Decker Mfg. Co., 641 Pennsylvania Ave., Towson 4, Md.

B&D PORTABLE GRINDERS prepare surfaces for welding; smooth welds; cut off rivets, bolts and studs; remove rust, paint; clean metal with wire-wheel brushes. 5" and 6" wheel diams.



Get these other B&D tools for faster, easier work:



SHEARS SCREW DRIVERS HAMMERS BENCH GRINDERS DRILLS

LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker PORTABLE ELECTRIC TOOLS

We Hear That . . .

will have six or seven rooms, including a 23 by 15 ft living room and two baths. They are located off Puritan Drive at Baraud Road.

THE UNITED STATES STEEL SUPPLY Div., U. S. Steel Corp., has opened a new warehouse in Houston, located at 9500 Clinton Rd., near Galena Park. Warehouse and office space will be leased from Tennessee Coal and Iron Div. of U. S. Steel. The new warehouse will carry complete stocks of steel — bars, shapes, plates, strip and sheets in carbon, alloy and stainless grades. All standard warehouse services will be available, including cutting, burning and shearing facilities.

A joint announcement issued by Gen. John J. O'Brien, president of Gunnison Homes, Inc., the company's housing subsidiary, and Cloud Wampler, president of Carrier Corp., states that for what they believe to be the first time, year 'round air conditioning is to be made available to purchasers of homes in the $7,000 to $12,000 price range. These companies have signed a contract under which Carrier will provide cooling and heating units to Gunnison Homes as optional equipment in all of its models to be produced and marketed in 1953. General O'Brien said, "Air conditioning already has become a major factor in selling new homes. We believe it will soon be a 'must' in the home building industry." He cited more than a dozen large scale home developments across the country, started in cooperation with Carrier Corp., which contemplate the erection of more than 3500 fully air conditioned homes.

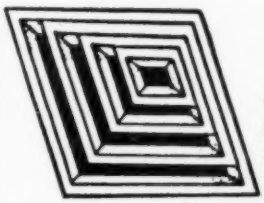
Last month the company's new Fairless Works began to produce iron and steel, and by next summer it will have produced a variety of finished steel products. Operation was started at a recent ceremony attended by 200 people, including members of the board of directors and other leading officials of the company.

Last year the company produced nearly 29,400,000 net tons of steel.

PERFECTION STOVE CO. has scheduled a series of district sales meetings to introduce its line of 1953 heating products to its salesmen throughout the country. Each meeting will run for three days and will be attended by the district manager of the territory in which it is held and his entire sales force. Representing the company's headquarters office at each meeting will be J. H. Rasmussen, vice president and director of appliance sales, and L. Bushfield, general sales manager.

A SURVEY recently completed by Chrysler Airtemp Div., Chrysler Corp., of 23 large scale builders who will construct more than 12,000 dwellings in 12 major cities indicates that air conditioning will be widely offered in 1953 as an integral utility in thousands of low and medium-price homes. Cities covered in the survey ranged from Detroit in the north to Miami in the south.

. . . beat your air distribution problems with Air-o-Vane

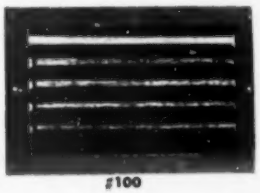


You can make or break any job with your selection of registers and grilles. If you choose unwisely you may well unbalance the architectural motif as well as the engineering design, and leave yourself out in the cold for repeat orders.

Don't take any chances . . . do the job *right* from the start with Krueger Air-O-Vane registers and grilles.

Also check into the Air-O-Vane ceiling diffuser . . . made in type D-R with positive shut-off control (pat. pending) . . . and in all sizes.

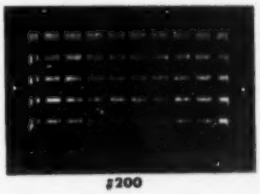
It will pay you well to investigate the Krueger Air-O-Vane line . . . just drop us a line today and we'll gladly send you more information.



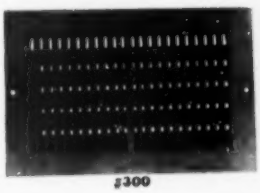
#100

". . . smartly designed"

"simple to operate"



#200



#300

". . . full range of sizes"

KRUEGER
AIR CONDITIONING COMPANY

19 EAST RILLITO ST. TUCSON, ARIZONA

GAS-FIRED
MODEL A00 ILLUSTRATED



"KLEEN-AIRE"

MEANS

COMFORT . . . . . .
DEPENDABILITY . . .
ECONOMY . . . . . .
CLEANLINESS . . . .
SAFETY . . . . . .



GAS & OIL FIRED MODELS AVAILABLE WITH BUILT-IN PRECIPITATORS.

GAS and OIL

DEALERS: "Cleanliness" it the saleword today! With the ELECTRONIC KLEEN-AIRE—the ultimate in heating comfort is combined in the unit with an electrostatic precipitator which removes up to nine times as much dirt from the air circulated through the home as do other furnace filters. The cost of operation is equivalent to that required to operate a fifty watt light bulb. Write for further details and literature.



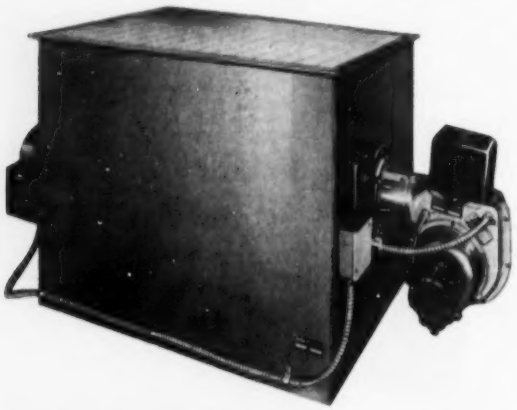
GREEN CITY FURNACE CORP.
SPRINGDALE, PA.

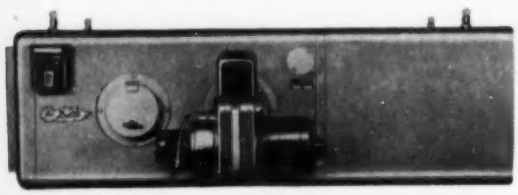
EXCLUSIVE DEALERSHIPS AND DISTRIBUTORSHIPS OPEN

(Advertisement)

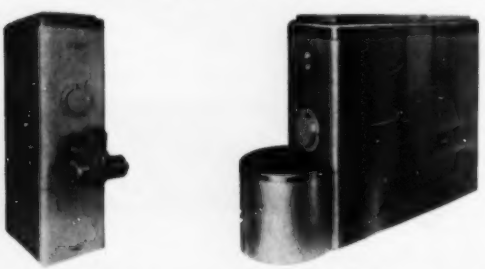
Delta Plans "Live Exhibit" at Chicago

DELTA HEATING CORPORATION, Trenton 8, N.J. has completed plans for a "live exhibit" at the Chicago heating show. Delta's new gun-type floor furnace in full operation will be displayed as a featured item at the Delta booth #2-1018 during the industry's 11th International Heating & Ventilating Exposition, scheduled for the Chicago International Amphitheatre, January 26 to 30. Invitations for free admission can be obtained by writing Delta Heating Corporation, Box 1059, Trenton 8, New Jersey. When requesting admission tickets, please list names and official positions of all visitors. This new Delta floor furnace (as pictured) will be operated with #2 cat-cracked fuel oil, which the new unit burns thoroughly without soot or carbon. The complete





line of Delta home heating and commercial furnaces will also be on display at the 40 foot Delta exhibit. Included will be the Horizontal furnace (as pictured) in 4 sizes up to 210,000 BTU's, 3 Hi-Boy (as pictured) and Counterflow models, 3 Lo-Boy furnaces (as pictured), the Delta Gravity furnace, Vaporizing Floor and Dual Wall furnaces, and Delta's Conver-



sion Burners for gas and oil. A. L. Nathan, Delta president, together with Roy C. Hauck, vice-president, and all Delta field sales managers will be present at the Delta booth #2-1018. If you cannot attend the show, write for FREE literature, specifications, and prices. No obligation. A post card will do.

We Hear That . . .

Seventeen of the builders contacted stated they definitely will include packaged air conditioning units in homes that will be ready for the 1953 residential market. Twelve of this group reported air conditioning has been installed already in homes nearing completion. The majority of homes for which air conditioning is proposed fall in the $12,000 to $23,000 category. All of the builders contacted foresee an excellent market for low and medium-priced homes offering year 'round air conditioning.

MINNEAPOLIS-HONEYWELL REGULATOR CO. has announced plans for a $900,000 expansion of its main plant in Minneapolis. The plans include the construction of a two-floor addition that will add 59,000 sq ft of floor space to the present main building which, in addition to extensive manufacturing operations, also houses the company's executive and administrative offices. The additional space is required because of the company's expanding ordnance program.

THE LENNOX FURNACE CO. plans a nation-wide sales program of all-season air conditioning equipment in 1953. New year 'round air conditioning equipment has been in the process of development in the general laboratory at Marshalltown, Ia., and is now being manufactured in the Fort Worth factory.

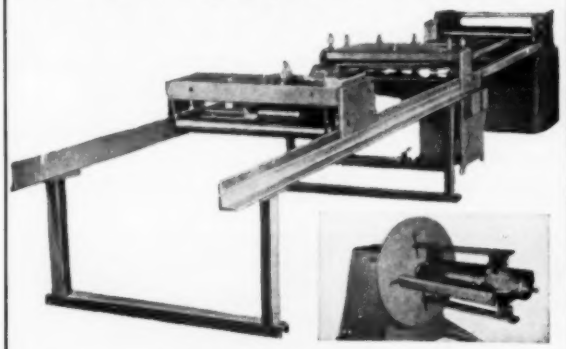
U. S. MACHINE CORP. is planning a series of 11 one-day shows beginning February 5 and running through Feb. 20, at which time new Winkler equipment will be displayed to its dealer personnel and plans for 1953 will be presented. The series will open at Lebanon on February 5. Other cities covered will be Lansing, Mich., Chicago, Minneapolis, Cedar Rapids, St. Louis, Greensboro, N. C., Philadelphia, Boston, Rochester, N. Y., and Columbus, Ohio.

REMINGTON AIR CONDITIONING Div., Remington Corp., has contracted to supply RCA-Victor with console type single room air conditioners which the latter will market under its own brand name this year. The consoles contain the Remington humidity control and power economizer by which excess moisture drawn from the conditioned air is used to help cool the refrigeration equipment.

MORE THAN 15,000 high school seniors recently participated in a three-hour aptitude test as the first step in the competition for the Westinghouse Electric Corp. science scholarships. Forty students will be chosen to share in $11,000 worth of scholarships.

THE WEBSTER ELECTRIC CO., Racine, is making available to distributors and dealers of heating equipment a series of nine packages of fuel units, ignition transformers and replacement parts. These packages enable the wholesaler and dealer to carry stock for a wide range of applications. Of the nine packages, five are

Modern De-Coiling Equipment by "DAHLSTROM"



Coiled materials are fed, straightened, measured, cut into sheets, and ejected on a continuous basis automatically. Line shown handles to 36" widths in 20 ga. mild steel—coil weights to 6000#. OTHER CAPACITIES AVAILABLE.

Inset shows self centering coil reel which is part of the complete line—Unit has infinitely variable speed drive between 35 and 100 fpm.

PURCHASE ALL YOUR MATERIALS IN COILED FORM AND ENJOY THE FOLLOWING ADVANTAGES:

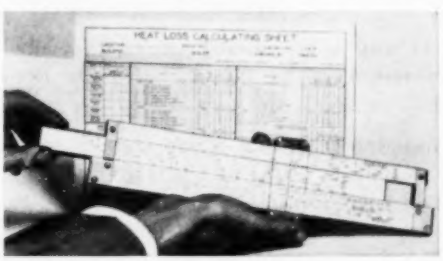
- Lower material inventories
- Less Scrap (sheets can be cut to exact lengths needed)
- Material handling savings
- Tons more storage in the same space

DAHLSTROM MACHINE WORKS, INC.

4227 West Belmont Ave. Chicago 41, Ill.

HEAT LOSS CALCULATOR

Accurate, inexpensive heat loss estimates are readily obtainable with the new "Climatemaker" heat loss calculator announced by its manufacturer, and designed for use of dealers in residential heating equipment. The Climatemaker eliminates the drudgery, guessing and expense of heat loss calculating with complicated reference books and charts. It saves 11 steps in figuring heat loss. It



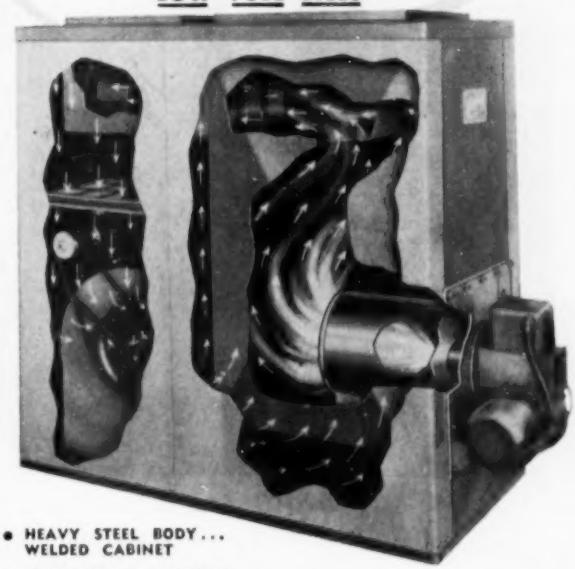
estimates btu loss for each room, plus total loss from house; CFM requirements for forced warm air, gravity 200° and gravity 175° heating units; square feet of steam or hot water radiation required; pipe area and other details for systems and for each floor; line loss; coal, oil or gas furnace sizes and other details. Send $15 cash, check or money order or write for full details to Climatemaker Heat Loss Calculator Co., Dept. 111, Box 378, Bloomington, Ill.

NEW LOW COST HACKER

STANDARD HEATING EQUIPMENT CO.
WATERLOO, IOWA

CABINET OIL BURNING FURNACE

AFTER FIVE YEARS OF EFFICIENT OPERATION, OWNERS EVERYWHERE ARE ENTHUSED OVER THE QUIET OPERATION AND THE LOW FUEL BILLS



- HEAVY STEEL BODY... WELDED CABINET
- FOUR SECTION PREHEAT CHAMBER
- AIR FILTER EXPANDED FIBRE 20" x 25"
- ¼ H.P. MOTOR WITH VARIABLE SPEED PULLEY
- 12" WHEEL BLOWER
- RETURN AIR INLET 16½" x 16⅛"
- WARM AIR OUTLET 16½" x 22"
- GUN TYPE BURNER
- STAINLESS STEEL COMBUSTION CHAMBER
- BAKED METALESANT CABINET FINISH

Here is the furnace that will get you the contract. Keep your *cost low* when bidding gets tight. Dealers everywhere are making an *excellent* profit even against the most vicious competition. Shipped completely assembled for *lowest installation cost.*

MAIL COUPON TODAY!

FREE LITERATURE

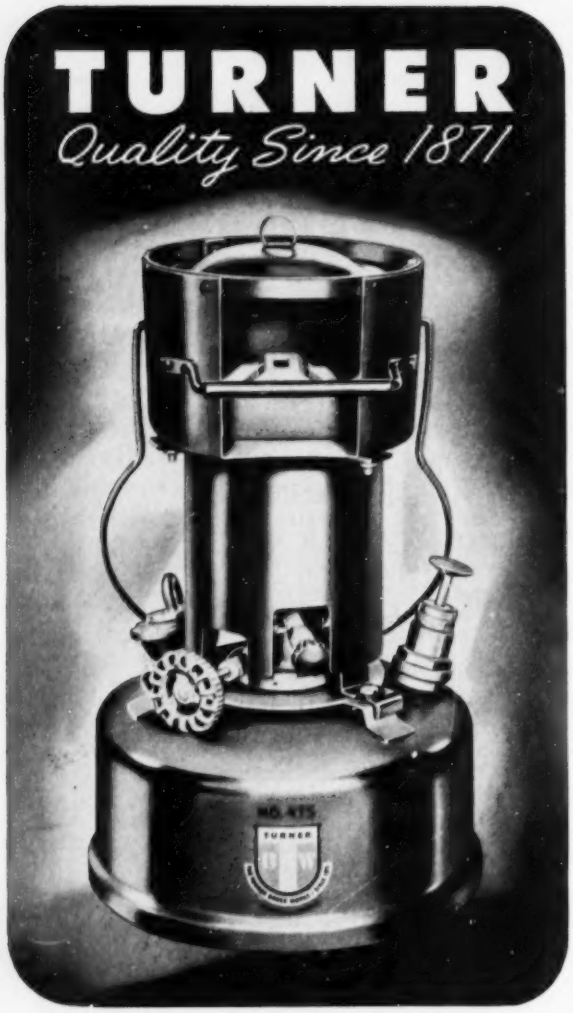
Standard Heating Equipment Company
Waterloo, Iowa

Gentlemen: Rush me complete money saving facts on the new Hacker oil-burning furnace.

NAME .....

ADDRESS .....

CITY ..... STATE .....





No. 475 Low Pressure
TINNER'S FIRE POT

● Smokeless . . . sparkless . . . sootless! Complete with Turner's exclusive "Carburetor Control" for more perfect combustion; also a flame control — for exact heat desired — which automatically cleans the orifice. Construction assembly permits quick, easy accessibility . . . windshield, top-plate, and bail handle are one unit, and can be lifted from tank by loosening one wing nut. Burner coil is made of extra-heavy seamless steel tubing, protected by sturdy outer jacket that maintains heat without overheating; can be generated and used in heavy wind. Fuel capacity — one gallon; burns for 9 hours on one filling. Get details, too, on Turner's popular Plumber's Fire Pot (No. 275); also Turner's complete line of Blow Torches.

See Your Jobber

THE TURNER BRASS WORKS
SYCAMORE ILLINOIS
Since 1871

We Hear That . . .

wholesaler assortments. The packages include those units and parts which are adaptable to the most installations.

THE OPENING of a new branch warehouse in Miami by Southern States Iron Roofing Co. was celebrated recently with an all-day housewarming party. The new



AMONG THE FIRST to place an order for supplies from the new Southern States warehouse were Emery Findley and Art Humann of Miami, Fla.

branch will carry a complete stock of building materials and metal products, providing pickup service and overnight delivery to dealers and fabricators in the Miami-Palm Beach area. Emried D. Cole, formerly manager of the Hattiesburg, Miss., branch, is now manager at Miami.

The company's Savannah plant has won a National Safety Council Award for having the best safety record of its class from July 1, 1951 to June 30, 1952. The annual contest is based on the ratio of lost-time accidents to man hours worked. Southern States had a perfect record of no lost-time accidents during the period.

THE ARMSTRONG CO. has moved into its new Chicago plant at 1001 E. 103rd St. C. D. Forbes, president, and Clifford Anderson, vice president in charge of sales, are both now located in the new Chicago general offices.

THREE OFFICIALS of the L. J. Mueller Furnace Co. have been elected to posts in the National Warm Air Heating and Air Conditioning Association. Frank J. Nunlist, Jr., general sales manager, is now on the association's board of trustees. L. A. Miles, refrigeration engineer, is chairman of the committee on summer air conditioning, and O. J. Ress, the company's director of research, has been named to the forced warm air manual and codes committee.

THE TIME YOU SAVE WITH
YOUNGSTOWN FITTINGS
MEANS MORE JOBS and BETTER PROFITS

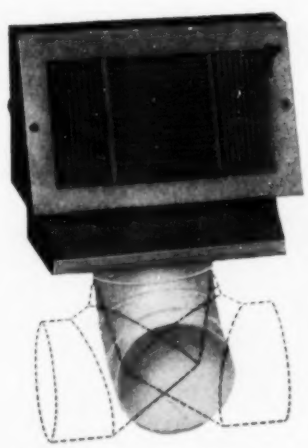
. . . and that is a fact! The less time spent on installations and the fewer call-backs you have to make — the better are your chances for profits by the cutting down of the man-hours you must allow on furnace installations.

There's no question but that proper fittings expertly installed are the answer . . . and you'll find the fittings here at Youngstown. They are made to standards of quality which are unsurpassed in the industry. We know that they will go in on every joint, on every job with an absolute minimum of time. There's no cutting or juggling to contend with . . . *they'll* FIT the first time, and *you'll* be able to count on your usual substantial profits.

We'll be glad to send more information . . . . please write us.

YOUNGSTOWN FURNACE CO.

627 Marshall Street **Youngstown, Ohio**



OUT-O-WALL

Trade Mark Registered
United States Patent Office

The New "OUT-O-WALL" Special

★ **Saves YOU money**
No boots needed. Head and boot combined in one piece.

★ **Saves YOU time**
When register is set you're ready to run pipe in any direction.

★ **More efficient**
New three-way grille designed specifically for Perimeter and High Velocity heating installations.

Sizes
OUT-O-WALL Special
10x6 — 4" or 5" pipe size
12x6 — 6" or 7" pipe size

Floor Diffuser sizes

2¼x14	
4x10	6x10
4x12	6x12
4x14	6x14



The No. 45 Perimeter Diffuser for floor or toe-space installation is a good companion in the Rock Island Line.

Write for further information. We manufacture a complete line of gravity, floor, and air conditioning registers.

ROCK ISLAND REGISTER COMPANY
Rock Island, Illinois

We Hear That . . .

THE FRIGIDAIRE DIV., General Motors Corp., is offering this year's residential air conditioning market units designed for new or existing homes. The company now has 3, 5, and 7½-ton capacity units for residential cooling, and soon will also have year 'round combination heating and cooling units.

A SERVEL, INC., oil-operated all-year conditioner (the first in the history of the industry, according to the company) recently was installed in a clinic at Elgin, Ill. These units are expected to open a new market for the oil industry which has formerly been supplying only winter heating demands.

CONCO ENGINEERING WORKS engineers are completing final development work on a year 'round air conditioner for the small homes market. The new air conditioner will be designed and priced for the merchant-built market. It will use a single duct system.

LIBBEY-OWENS-FORD Glass Co. has formed the Corrulux Div., based upon acquisition of all the properties and assets of the Corrulux Corp., Houston. It is the fourth separate division of the company, and is under general executive direction of G. P. MacNichol, Jr., vice president, and headed by Joseph S. Finger, former president of Corrulux, as general manager. Corrulux has developed a line of reinforced fiber glass panels used for skylights, etc.

A LINE OF GAS and oil heating equipment, to be called Silent Automatic Products, will be introduced at the International Heating and Ventilating Exposition in Chicago by The Timken Silent Automatic Div., The Timken-Detroit Axle Co. The new line will be marketed only through wholesalers and will be handled by an entirely new sales organization.

Included in the line will be gas conversion burners, oil conversion burners, gas sectional furnaces (both standard and utility room sizes) and a series of furnaces interchangeable for gas or oil.

A NEW COLOR motion picture, *Take a Look at Tomorrow*, examining the future of aluminum, has been released by Kaiser Aluminum & Chemical Corp. Animated sequences are used to condense and simplify the aluminum process in the 24 minute, 16 mm film.

THE AIR CONDITIONING DIV., General Electric Co. has appointed Mechanical Contractors Supply, Inc., Winter Park, Fla., as its sole distributor covering the State of Florida and fourteen Georgia counties along the northern Florida boundary. George J. Collins has been appointed vice president and general sales manager of the distributor.

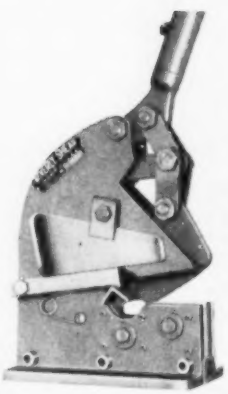
Beverly Shears MEAN BETTER WORK



B-3 with Ball Bearing Hold Down

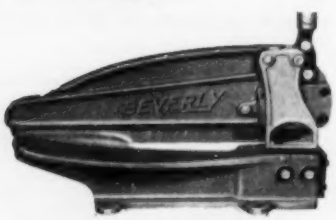
THROATLESS SHEAR

Make straight or intricate cuts in the lightest metals without distortion, yet handle heavier gauges with ease on a BEVERLY — the all-round Throatless Shear. Made in 4 models to handle 18 gauge 3/16". Equipped with High Carbon, High Chrome Blades.



CABLE CUTTER

Cuts wire rope up to 11/16" dia. quickly and cleanly at one stroke. Also handles heavy electrical cable, armored cable, steel reinforced rubber hose, etc., with ease. Snap-Action Hold Down assures faster operation. High Carbon, High Chrome blades assure long cutting life.



INSIDE SLOTTER

8" reach, Inside Slotter, designed to make inside cutting and slotting faster and easier. Capacity up to and including 16 ga. mild. Cuts slot 2½" long x ⅛" wide with one stroke. Unique arrangement of 5 H.C.H.C. blades assures fast, clean, accurate cutting.



SLITTING SHEAR

All steel welded construction, plus extra built-in strength keeps the "SS-3" Slitting Shear cutting clean indefinitely. No springing of blades, no distortion after use. Slitting capacity 3/16" mild steel; trimming capacity 5/16"; bar capacity ¼" x 2". Equipped with High Carbon, High Chrome Blades. Made in 3 sizes.

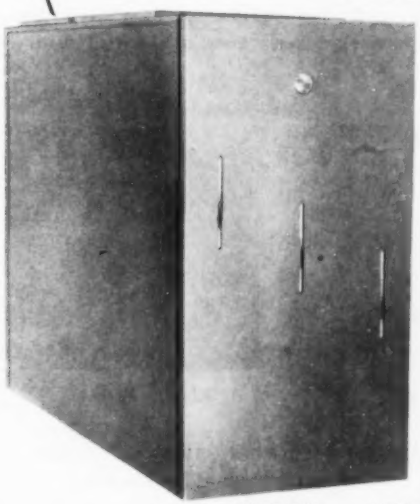
See your Dealer or Write direct for illustrated catalog sheets on Beverly equipment.

THE BEVERLY SHEAR MFG. CO.

3020 W. 111th Street **Chicago 43, Illinois**

Superior —

WARM AIR FURNACES FOR



WINTER AIR CONDITIONING

FOR

RESIDENTIAL AND COMMERCIAL INSTALLATIONS

COMPACT — COMPLETELY AUTOMATIC

DESIGNED FOR MINIMUM SPACE

COMPLETE LINE of GAS and OIL

HI-BOY — LOW-BOY — COUNTERFLO — GRAVITY — SUSPENDED UNITS
FROM 60,000 BTU to 400,000 BTU

Superior FURNACE & MANUFACTURING CO.

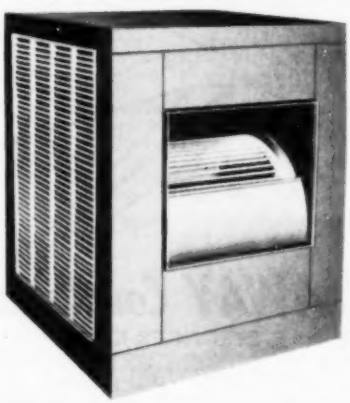
322 HAMILTON AVENUE **PLYMOUTH, MICHIGAN**

Reduce Temperatures from 12 to 18 Degrees

with **Chill Air**

for Employee and Customer Comfort

Evaporative Coolers



For more than 20 years millions of people have enjoyed the comforts of CHILL-AIR cooling. Thousands of business men know by experience that comfort cooling means greater employee efficiency, customer comfort, increased **sales** and **profits.** Hundreds of contractors and dealers know that CHILL-AIR means easy **sales** and **profits.**

Why not you?

FEATURES

- **New Patented, ODORLESS, Sag-Proof Evaporative Pad**
- **Attractive Finish**
- **EXTRA HEAVY Steel Cabinet Protected by Seal Bonding Process**
- **Designed for use with pump kit**
- **UNIFORM, NON-CLOG Water Distribution Trough**
- **All motors 110-220 volt, single phase**



Model No.	C.F.M.	Cu. Ft. of Space to be Cooled
B-55	5,500	5,000 to 11,000
B-75	7,500	7,000 to 15,000
B-100	10,000	9,000 to 20,000
B-175	17,500	15,000 to 30,000

FREE* ENGINEERING *SERVICE
***FREE* LITERATURE,**
Upon Request

Model No.	C.F.M.	Cu. Ft. of Space to be Cooled
B-30	3,000	2,500 to 5,000
B-40	4,000	3,500 to 6,000

All larger sizes from 25,000 C.F.M. to 75,000 C.F.M. built to order.

521 WYANDOTTE ST. **National Engineering & Mfg. Co.** **KANSAS CITY 6, MO.**

This Plan Will Enlarge Your Business; Improve Your Profits In 1953

FREE
Super Sales Plan Book

It's easy to build a profitable furnace cleaning business. This book tells you how. Your wholesaler can give you complete information on the Super Red Streak Model SH or ask us.

Here is a powerful proved merchandising force that will help you build a bigger, better business. The Super Free Plan Book tells you how to start and operate a furnace cleaning business the Super Red Streak way which gives you a constant source of profitable income and leads you to orders for plants and repairs. The Super Red Streak Model SH pays for itself many times over in expanded volume of sales and profits.

So constructed and engineered anyone can operate it efficiently and easily, the Super Red Streak SH cleans chimneys from the basement up without disturbing the household, endangering the operator. The Red Streak cleans 'em hot or cold. The chimney cleaning tools are standard equipment.

Write for this free book that tells you how to get into the basement while your competitors are still ringing the door bell. Ask your supplies dealer or write.

New Non-Clog Filter Bag

The new Supertex filter bag is made of a special fabric. Acids and chemicals in coal and oil soot and other dusts form a fragile film on the inside surface of the Supertex bag. This film breaks down and falls, leaving the pores of the bag unobstructed and the fabric undamaged.



All Models approved by Underwriters' Laboratories and Canadian Standards.

Super Red Streak Model SH

For both wet and dry, hot and cold cleaning. May be equipped with Supertex Oil Soot Filter Bag at slight extra cost. Note that Supertex bag is not over-size but of standard compact size.

NATIONAL SUPER SERVICE CO., INC.
1944 N. 13th St. Toledo 2, Ohio

Sales and Service in Principal Cities

In Canada: Plant Maintenance Equipment Co., Toronto, Montreal, Vancouver

"Once Over Does It"

SUPER SUCTION®
SINCE 1911
"THE DRAFT HORSE OF POWER SUCTION CLEANERS"

appointments . . .

JACK HARRIS as district engineer at the new district engineering office in Milwaukee for KSM Products, Inc., manufacturer of studs and equipment for electric arc stud welding. He was formerly associated with Gregory Industries.



Jack Harris



Chester Barbeck

CHESTER A. BARBECK as product promotion manager for self-contained Weathermaker units for Carrier Corp., with headquarters in Syracuse. Formerly he was merchandising manager for the company's Dallas district.

A. L. RUBEL as manager of a new district warehouse for Penn Controls, Inc., at 1503 N. Broad St., Philadelphia. The company has established four other warehouses: in

Do it the **MELAWAY**

SPLICE GUTTERS IN 1/10TH THE TIME



with **MELAWAY Couplings**

• SAVES TIME • STRONGER JOINTS • COSTS CUT IN HALF • QUICK, TIGHT PATCHING • ONLY ONE TOOL NEEDED • SIMPLE AND EASY TO USE • SHORT ENDS USED—NOT WASTED

MELAWAY CORPORATION
BRANDON, WISCONSIN
Telephone 1361



You can make 1953 a better and more profitable year with these completely NEW VERSAT-ALL Winter Air Conditioning Units—designed to burn either oil or gas.

A.G.A. APPROVED for *all types* of gas, these units are available in Hiboy (up-flow or down-flow) and in Basement sizes to meet any residential heating requirement.

VERSAT-ALL
WINTER
AIR CONDITIONING UNITS

See the improved design and dimensions of the VERSAT-ALL heat exchangers. See the NEW VERSAT-ALL gas burner that is A.G.A. APPROVED for *all types* of gas.

In 1953 these VERSAT-ALL units will help you reduce inventories, improve your service to customers and make each job deliver its full profit—PLUS enthusiastic customer satisfaction. You'll see.

Write, wire or 'phone

ROUND OAK COMPANY, INC.
Phone 396—Dowagiac, Michigan

It's the LOW DOWN DIRT trapped by WILSON'S HAIR FILTERS that GUARANTEES LONGER LIFE

In Wilson *Hair* Filters the entire dust-holding capacity is completely utilized. This means, *no surface dust stopping only*, but Full-Depth Dust Trapping at its best . . . and many extra months of filter life.

The *reasons* are so simple:

1. The hair media in Wilson *Hair* Filters act in the same manner as Mother Nature's proven way of filtering the air you breathe. It's the *hair* that cleans the air . . . more easily, more effectively, more economically.
2. The multi-directional distribution of the hair in Wilson *Hair* Filters literally invites all dust and dirt to come in and be trapped throughout the entire filter interior.
3. Most brands of air filters require oiling on their inlet surfaces. This stops dust prematurely, loads up the incoming air side and materially shortens filter life.

Wilson Hair Filters are not oiled on the inlet side. Instead, they receive an even distribution of mineral oil *on their outlet surface*, which:

(a) augments the already amazing ability of the hair itself, to catch and hold dust, and—

(b) builds an impregnable barrier which halts dust and dirt after reaching the furthermost practicable penetration point.

WILSON & CO., INC.
(Air Filter Division) 4100 South Ashland Ave., Chicago 9, Ill.

Wilson Hair Filters are another quality product of Wilson & Co., world-famous for meat products, sports equipment, pharmaceuticals, hair products, etc.

The famous Edgeseal, the original *Hair* Filter with the patented self-sealing edge.



The popular Honeycomb, the dressed up *Hair* Filter that is so easy to handle.

Save delay. Save dollars. Save doubt. Send for FREE sample with details and prices.



HomEase is the Burner that offers you the Exclusive

FLAME-IZER ... *high CO_2 flame-fitting to the individual fire-box, quickly, easily!*

FIRE-STAT ... *more starting air—thus less sooting and smoking on cold starts!*

MORE SALES.. GREATER PROFITS *easily!*

VARIOUS MODELS: .5 to 15 gph



HomEase has an important place in thousands of homes ... has thousands of satisfied owners ... it should have an equally important place with *you*. Get the all-important facts, *Now*

HomEase Products Company

PATERSON 3, NEW JERSEY

HOMEASE

THOMAS REGISTER

appointments . . .

Boston, 175 Adams St., Newton, Mass., under the direction of A. W. Barr, district manager; in the New York area, 8111 Bergenline Ave., North Bergen, N. J., supervised by district manager George Sanders; in Cleveland, at 6207 Superior Ave., managed by J. F. Kinney; in the San Francisco district, at 920 Grayson St., Berkeley, supervised by E. T. Layport, district manager.

JOHN N. ALLEN as district sales manager in Cedar Rapids, Ia., for the American Brass Co., which has opened a new district office there. Mr. Allen was formerly with the company's Chicago sales staff. The new office is located in the Merchants National Bank Bldg.

J. Q. A. DOOLITTLE as assistant to the manager of production, Allegheny Ludlum Steel Corp. He has been manager of the Watervliet, N. Y., plant, and is succeeded there by Arthur H. Hanks, who has been manager of the plant's new hot extrusion and stainless tubing department.

JOHN M. TUTHILL as assistant general manager of sales for The Youngstown Sheet and Tube Co. For nearly three years he has been manager of flat rolled sales. He succeeds Arthur M. Long who died recently. L. E. Arnold, transferred from the Detroit sales office to the

SENSATIONAL INSTANT PAINT ! !

SPRAYON CHAMPION

SPECIAL "READY MIXED" CHROME HI-HEAT RESISTANT BAKING QUALITY

ALUMINUM PAINTS



FREON PROPELLED AEROSOL BOMB PRINCIPLE

No mixing, no clean-up, no compressor or hose needed. Just shake the can and paint. New type can with new, improved non-clogging inner mechanism and spray valve.

Excellent for Painting or Touching Up

Radiators	Convectors
Boilers	Furnaces
Water Heaters	Fin Pipes
Piping and Cocks	Air Conditioning Equip.
Refrigerators	Oil Burners
Oil Tanks	and 101 other uses

COLORS

Chrome Aluminum
Gloss Black • Meadow Green
Bright Red • Medium Gray
Royal Blue • Ivory
Bright Gold • Clear Plastic
Gloss White • Yellow, Copperplate
Black Undercoater • Black and Aluminum Lacquer

Ready Mixed Aluminum Lacquers

✦

Aluminum Powders and Paste (Pigment)

Bronze Powders in Gold, Copper, and Special Shades

For the Plumbing and Heating, Sheet Metal, Refrigeration and Mill Supply Trades.



Whatever your requirements, we can furnish a suitable product for all manufacturing, maintenance or jobbing purposes.

CHAMPION BRONZE POWDER & PAINT CO.

2526 W. VAN BUREN Dept. A CHICAGO 12, ILL.

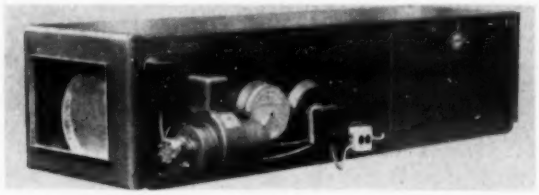
Horizontal Furnaces Opening New Profit Opportunities

Heating Contractors Help Builders Beat Rising Costs and Make Money Doing It

Keeping the cost of new homes within the reach of potential buyers is a major problem today. Builders and contractors are meeting it in two ways: First, to beat the high cost of single lots, they are developing large tracts of land and building many homes at the same time. Second, they are eliminating every possible costly feature — basements, garages, even service rooms.

New Furnace Opens New Field

This is opening up a whole new field of opportunity for the heating and sheet metal contractor—the sale and installation of underfloor central warm air heating systems. The sensational NEW "Besser Junior" makes central heat possible in even the lowest cost homes.



The Besser Horizontal Furnace Needs No Basement or Utility Room — Can be Installed Under-floor or Overhead

Because of the great savings, more and more builders are turning to the new type horizontal, oil-burning furnaces. A central heating system adds value to any house, makes it easier to sell—is far superior to floor furnaces. Now, the NEW "Besser Junior" brings central heat within every price range.

Here's Where Profits Are Made

Bidding on the big jobs is always competitive, so where do you come in? Here's the answer: to start with, you've got something to sell—the answer to a builder's prayer—a way to put central heat into every house without the cost of a basement or utility room. That's a natural advantage. Now, the cost is lower than ever.

Still, you may have to figure closely, so where's your profit? Right here! Service call-backs are what eat up your profit. When you install a Besser Horizontal, service calls are fewer—far fewer—because only the best goes into a Besser! Properly installed, it's virtually trouble-free. Call-backs will be few and far between. Every Besser is fully guaranteed . . . because it's built to last!



Besser Plant Facilities Expanded 50% to Meet Growing Demand

Double Sales Possibilities

Quiet, automatic Besser Horizontals are equally adaptable to overhead installation on commercial jobs where floor space is at a premium. One furnace gives you a double sales potential. Full range of sizes to meet every job need—delivered to you assembled, ready to install.

New Territories To Be Opened

Greatly expanded plant facilities make it possible to serve a larger area. Distributor franchises and dealerships in certain areas offer a real opportunity for profit in a product you can sell with confidence. Inquiries from aggressive Manufacturer's Agents invited. For full information write: Besser Metal Products Corp., 754 Clement Ave., P. O. Box 4064, Charlotte, N. C.

MSA
SAFETY EQUIPMENT HEADQUARTERS
for the
P. C. O.

M.S.A. supplies the safety equipment you need for dependable protection in pest control on the job . . . developed by intensive research and quality—built by the world's largest manufacturer of approved safety products. You're sure of safe performance and top wearing comfort when you specify M.S.A.—all the way!

M. S. A. GMC-1 GAS MASK

High-duty protection against exposure to heavy concentrations of Parathion, and for HETP and TEPP. Recommended for airplane pilots, formulators, mixers, and greenhouse use. Replaceable canister.

M. S. A. HCN GAS MASK

Protects against HCN concentrations wherever enough air is present to support life. Long-lasting replaceable canisters. Also available are individual canisters and complete masks for protection against all other vapors, dusts and fumes used for pest control.

M. S. A. FARM-SPRAY RESPIRATOR

Effective protection against Parathion, E. P. N., Dieldrin, Aldrin, T. E. P. P., H. E. T. P., O. M. P. A., and Systox in *one* Respirator. Recently accepted new type filters for complete protection are interchangeable with present M. S. A. Farm Spray Respirator.

M. S. A. DUST RESPIRATORS

Popular M.S.A. Comfo and Dustfoe models provide ALL-DUST breathing protection, with inexpensive throwaway filters.

M. S. A. PROTECTIVE CLOTHING

A complete line of clothing offering protection against poisonous sprays, dusts, etc. Hoods, coats, aprons, sleeves and gloves, of rubber or plastic.

M. S. A. FIRST AID KITS

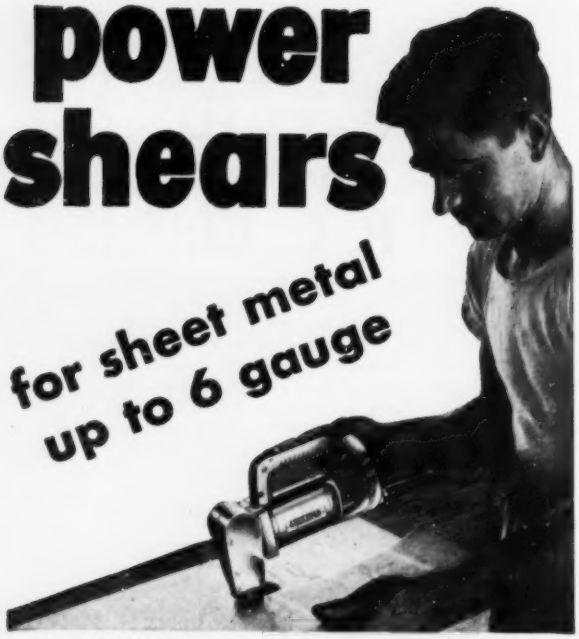
Unit-packaged first aid treatments, ready for instant use. Dust and moisture-proof steel cases.

Write for descriptive bulletins on these outstanding M.S.A. Products!

MINE SAFETY APPLIANCES CO.
Braddock, Thomas and Meade Streets
Pittsburgh, Pennsylvania
MEMBER NATIONAL PEST CONTROL ASSOCIATION

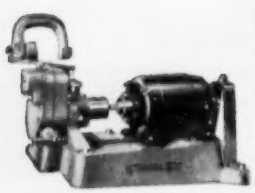
power shears

for sheet metal up to 6 gauge



No. U218 Unishear cuts up to 18 gauge hot rolled mild steel, at speeds up to 15 feet per minute.

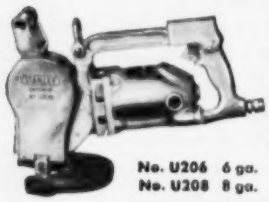
You save two ways when you cut sheet metal with Stanley Unishears. You save time — because Unishears cut faster and easier than ordinary hand snips. Second, you save filing, de-burring, and further trimming — because Unishears leave a smooth, finished edge right along the cutting line. Unishears are "self-feeding", and all the operator does is guide them. Available in twelve sizes for sheet metal up to 6 gauge. Ask your industrial distributor or write for descriptive literature. Stanley Electric Tools, 442 Myrtle St., New Britain, Conn.



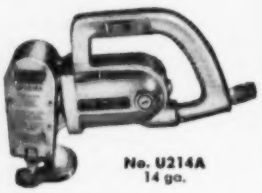
No. A-10
10 ga. portable bench model



No. O-15
14 ga. bench model with maximum versatility.



No. U206 6 ga.
No. U208 8 ga.



No. U214A
14 ga.

STANLEY
Reg U.S. Pat. Off.
HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

appointments . . .

general offices early in 1950, succeeds Mr. Tuthill in his previous post. In his new capacity, Mr. Tuthill will be in charge of 11 product sales in the Chicago, Milwaukee, Des Moines, Minneapolis, Indianapolis, Kansas City and St. Louis areas.

H. E. Ehlers, Jr., as assistant general sales manager and Ralph Rathyen as manager, Crucible & Refractories Div., for Joseph Dixon Crucible Co. Mr. Ehlers has held Mr. Rathyen's new post since 1948. Mr. Rathyen has been assistant manager of the Crucible & Refractories Div., since 1951.

Domenick Saponara appointed to the Timken Silent Automatic Div. engineering staff. He has had 21 years' experience in the development, manufacture and testing of gas-fired appliances and equipment.

James R. Mohr as manager of the merchant products sales department of the Chicago district office of American Steel and Wire Div., U. S. Steel Corp. Mr. Mohr, formerly assistant manager of sales in the division's district office, Detroit, has been with the company since 1921.

John T. Kemper as manager of the Boston electrical division office, Wagner Electric Corp., succeeding M. E. Comstock, who is retiring after nearly 34 years' service.

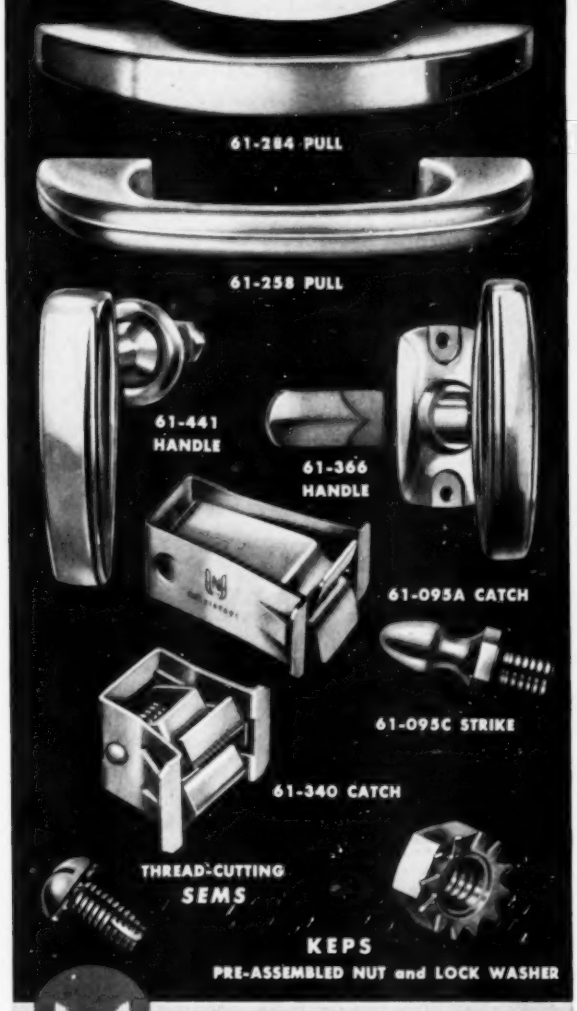


EXPERIENCED VENTILATOR MANUFACTURERS SINCE 1904

18511 Euclid Avenue, Cleveland 12, Ohio
The Swartwout Co.
Roof Ventilators and Ventilating Louvers
POWER PLANT EQUIPMENT • PROCESS INDUSTRY CONTROLS

Top Quality
NATIONAL LOCK
Hardware
makes a good product better

Ask About It For Use On
air conditioning equipment . . . stokers . . . gas heating units . . . oil burners . . . humidifiers . . . space heating units



write for complete information
NATIONAL LOCK COMPANY
ROCKFORD · ILLINOIS

REACH OUT FOR MORE SALES WITH *Radiant*



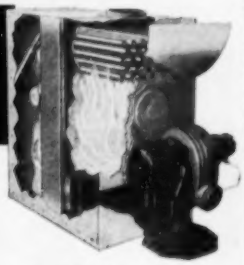
A Complete Line from ¾—30 Gals. Shell Head Models ½—10 Gals.

RESIDENTIAL
COMMERCIAL
INDUSTRIAL

Every PROFIT Reason Says—BUY RADIANT!

Performance—Equal to the highest priced burners. Price — Meets competition every time . . . *plus* — Low Upkeep — Factory Guarantee . . . National Distribution . . . Protected Territories . . . Easy Installation . . . Minimum Servicing.

THE *Radiant*
OIL FIRED WINTER AIR CONDITIONER



Precision Engineered for Economy in Price—Installation—Operation

SUPERIOR DESIGN — Tubular construction presents greater heating surface to flue gases than conventional furnaces . . . jacket is substantial and well finished . . . high temperature combustion chamber . . . motor driven blower unit and air filters.

FACTORY ASSEMBLED—Shipped complete with combustion chamber installed and jacket completely assembled.

Available in Four Models: Low Boy, Suspended Unit, Hi Boy, Counterflow

WRITE FOR COMPLETE RADIANT LITERATURE.
You'll sell— and profit more!

RADIANT UTILITIES CORP.
8817 18th Avenue, Brooklyn 14, N. Y.

RADIANT OIL BURNER

It's a BETTER Oil Burner Installation

with VENTALARM® Signal



The WHISTLING Tank Fill Signal

Safe Fills
No Spills

Oil man need never enter home.

TRADE LIST Model LA

$1.95

and SCULLY® Gauge



Easily read from even 10 ft. away
Leak proof; adjustable to any angle;
completely assembled.

TRADE LIST $1.45

or this
Money-Saving Combination

VENTALARM®-GAUGE



VENTALARM Signal and SCULLY Gauge combined in one labor- and money-saving unit.

TRADE LIST $2.95

One item to install instead of three. For 275-gal. tanks. Specify tank opening and depth when ordering.



FREE "Name Card" with every SCULLY Gauge or VENTALARM GAUGE

Slips into place on top of gauge. Assures permanent identification of your company.



Trade Prices shown subject to change without notice.

See your regular Supply House or write to Dept. 72

SCULLY SIGNAL COMPANY
First Street, Cambridge 41, Mass.

Scully products are manufactured under U. S. and foreign patents or patents pending.

Canadian Licensee: EMPIRE BRASS MFG. CO., LTD., London, Ontario

appointments . . .

Mr. Kemper was a field engineer in the Pittsburgh office until 1946 when he was transferred to Boston. He is a member of the American Institute of Electrical Engineers.



John T. Kemper



Edward J. Schultz

EDWARD J. SCHULTZ as regional manager of the Building Products Div., Reynolds Metals Co., with headquarters in the Wrigley Building, Chicago. Mr. Schultz will be in charge of all Building Product sales in the Chicago region, which includes 23 territories covering 14 states in the Midwest.

WALTER SPEAR as vice president of the fan and heater division, NuTone, Inc., Cincinnati. Mr. Spear has been with the company since 1949 and was formerly chief

See Your Dealer Early In '53!



get the GALVAN Story

And Learn Why

- Learn why GALVAN products are easier to install
- Learn why GALVAN products mean more profit to you
- Learn why GALVAN products give for better service



GALVAN Mfg. Co.

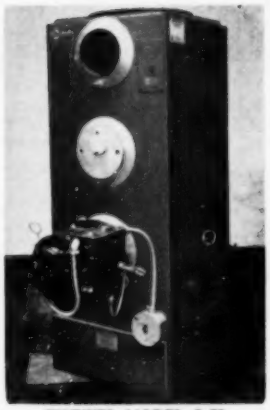
TITE-TOP FUNNELS | CONDUCTOR PIPE ELBOWS | CRARY'S CUT-OFFS

New Albany, Indiana

Firewel Forced Warm Air FURNACES

ECONOMICAL COMPACT READY TO INSTALL OIL OR GAS

This new "Factory Assembled" Forced Warm Air Unit is especially designed for low cost homes. Same construction as larger more expensive furnaces. Features include 14" diameter, 14-gauge Heat Exchanger with Internal Radiator — Brick Lined Combustion Chamber — Corrugated Asbestos Cell with Aluminum Foil Lining — 3-speed selector switch for blower — and many others.



FIREWEL MODEL A-70

See your distributor or write or wire direct for information on the complete FIREWEL line.

The FIREWEL Co., Inc.
3685 Broadway Buffalo 25, N. Y.

A NEW SHARP DRILL FOR EVERY HOLE . . .

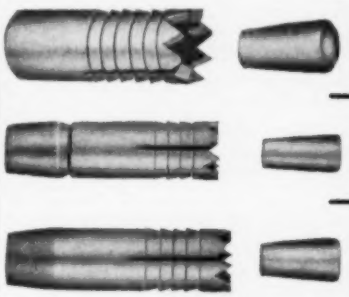
"BULLDOG" Self-Drilling EXPANSION SHELLS

BULLDOG EXPANSION SHELLS — The Grip That Never Slips

SAVE TIME, MONEY AND LABOR . . .

No Drills required . . . each shell a self-contained combination drill and anchor. Assures positive anchoring in concrete, brick or other masonry with application completed in seconds.

5000 HOLES–5000 ANCHORS...and NO DRILLS!



3 TYPES AVAILABLE

FLUSH
Recommended for general work where hand drilling is desirable or most economical.

SPECIAL FLUSH
Used in combination with Bulldog electric or air hammer chuck for volume installations.

ROD HANGERS
For use in sprinkler applications and fasteners for threaded hanger rods. Installed with electric, air or hand hammer.

Write Today —for literature, prices and technical information.

J.D.Polis MANUFACTURING CO
2900-20 W. 26th ST.
CHICAGO 23, ILL.



Throughout the **AIR CONDITIONING** *Industry—*

AEROFIN FIN-TYPE HEAT-TRANSFER UNITS do the job Better, Faster, Cheaper

AEROFIN CORPORATION
410 South Geddes St., Syracuse 1, N. Y.

The Answer to Every Rooftop Ventilation Problem . . .



Easily inspected and serviced. Just remove two bolts and tilt hood.

Allen High-Efficiency ROOF FAN

Whatever roof ventilation installation problem you face, you can rely on Allen-engineered, High-Efficiency Roof Fans for the solution. These motor-driven fans are ruggedly designed to do a steady, heavy-duty job, removing air laden with heat, fumes, vapor, dust. Installation is rapid, easy. To install, merely cut opening in roof, flash housing to roofing material, and connect electrically. Designed for flat roof or level curb installations. Available in wide range of capacities (750 to 45,000 cfm), many sizes, and in Standard, Direct Drive, and Remote Drive types. Write for catalog on complete line of roof ventilators

Representatives in principal cities are listed in our catalog in Sweet's Architectural File, Section 20b.

ALLEN ENGINEERED VENTILATION

PRODUCTION PLANNING CO.
ROCHESTER, MICHIGAN
Roof Ventilators for Every Commercial and Industrial Need

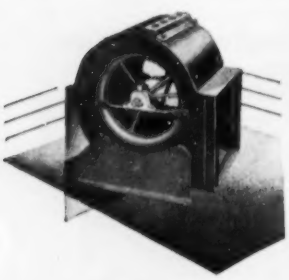
FLORITE Direct-Reading AIR VELOCITY METER



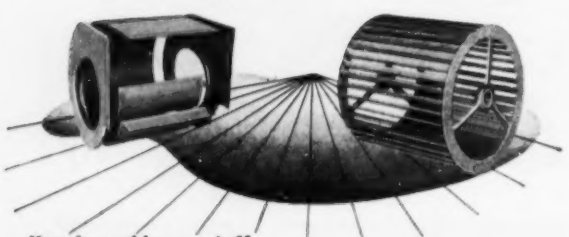
- *A practical, accurate air velocity meter for heating, air conditioning, and ventilating work. Indispensable for measuring grille velocities and air deliveries from registers and grilles; for balancing forced air heating systems, and for checking air distribution of all kinds of ventilating systems.*
- *Accurate velocity readings, automatically averaged over a 3" dia. free area, instantly indicated in feet per minute.*
- *Extension handle facilitates positioning of instrument away from the observer for readings in hard-to-reach locations, or where the observer's body would interfere with the normal air movement.*
- *Unique scale lock makes possible to retain scale reading when desired until the lock is released—an indispensable feature where extension rod is used to position instrument away from the observer.*
- *Leather case is furnished as standard equipment for added protection when the instrument is not in use and for convenience when carrying it in the pocket.*

Ask your Jobber for the FloRite or write for Leaflet 760.

BACHARACH INDUSTRIAL INSTRUMENT CO.
7301 PENN AVENUE • • PITTSBURGH 8, PA.



MASSACHUSETTS AIR CONDITIONING FURNACE BLOWERS
Designed for manufacturers of warm air furnaces and air conditioning equipment.
Wheel Sizes 7½" to 27"



Housing sides, cutoff plate and scroll sheet. Heavy gauge steel stampings.

End spider suspension type wheel assembly.

Write for catalog

Manufacturers of centrifugal blowers for 36 years

MASSACHUSETTS BLOWER DIVISION
The BISHOP & BABCOCK Mfg. Co.
4901 HAMILTON AVENUE · CLEVELAND 14, OHIO

appointments . . .

engineer of the fan and heater division. Bruce Corbett, formerly midwestern sales manager, has been promoted to vice president, Midwest sales division, with headquarters in Chicago. He has served as a member of the company's sales and supervisory staff for the past six years.

GEORGE R. MCMULLEN, formerly manager of automotive sales and manager of the transportation division of the Owens-Corning Corp., has joined the sales department of the Gustin-Bacon Mfg. Co.

ANTHONY F. DEEGAN as manager of Southern States Iron Roofing Co.'s Memphis warehouse. He succeeds



A. F. Deegan



M. L. Peek

Marion L. Peek, who has been transferred to Savannah, Ga., and promoted to warehouse supervisor for the com-

PIPE AND FITTINGS GUARANTEED QUALITY!

All Ajax fittings are made of high-grade, full gauge sheets . . . no seconds used! Quality is fully guaranteed. Your order, large or small, receives prompt, personal attention.



Scientifically designed to reduce air friction

For help on your heating problems our engineering department is at your service. Contact us . . . we'll gladly work with you.

Write for catalog of Furnace Fittings.

Double seamed for strength and air-tight construction



Ajax Furnace Fitting Co.
Division of
The Cincinnati Sheet Metal & Roofing Co.
216-20 E. FRONT ST. CINCINNATI, OHIO

...here's the

JABSCO

Bronze Evaporative Cooler

PUMP

The outstanding pump for evaporative coolers. Here's why:

JABSCO'S ADVANTAGES:

- DRIVEN BY BLOWER SHAFT—separate pump motor and wiring eliminated
- INEXPENSIVE • EASY INSTALLATION
- NOISELESS • MAINTENANCE FREE

Capacity: 105 Gallons per Hour @ 500 RPM
180 Gallons per Hour @ 870 RPM
240 Gallons per Hour @ 1160 RPM

Write for free folder. Price includes pump, mounting brackets, hoses and screens. Liberal discounts to O.E.M. and distributor accounts.



price complete $18.25

EXCLUSIVE JABSCO FEATURES:

- NEOPRENE IMPELLER—Water lubricated—wiping action prevents liming
- ALL-BRONZE BODY
- STAINLESS STEEL SHAFT
- GRAPHITE BEARINGS
- MECHANICAL SHAFT SEAL

PATENTED AND PATENTS PENDING

JABSCO PUMP CO.
2041 N. Lincoln Street, Burbank, Calif.

Every COOK Fan Blade is *Individually* precision set



- All blades balanced and set to proper pitch for rated horsepower and CFM.
- Aluminum hub and blade, cast separately, machined and fitted with precision accuracy.
- Blade is securely locked to hub for long life and true pitch by taper pin bolt.

The cut-away photo above shows why rugged Cook Fans last longer and actually deliver their stated capacity. Each blade is individually set to the proper pitch for the rated horsepower and CFM. Thousands of Cook-built propellors have already proved their dependability.

Sell Cook Industrial Fans and the New Cook "Chimney Style"* Attic Fan



Up-Blast Roof Ventilator in 16" to 48" sizes. Automatic dampers. Acid resistant coated, aluminum blades, up to 40,000 cfm output.



*Patent pending.

New "Chimney Style" Attic Fan saves attic space. Acid resistant coated steel chimney housing a direct drive fan. Easy to install, automatic dampers. Three sizes.



Cook Duct Fans. Direct or belt drive. Orifice 16" to 48". Ideal for spray booths.



Cook Type S Fans. Frame 24" to 48". Easy to install. Glass-insulated or explosion proof.



Portable Man-Cooler. Adjustable welded steel frame on rollers. Propeller 16" to 48".

COOK

Write for new catalog to Dept. AA, Leren Cook Co., Berea, Ohio

POSITIVE DISCHARGE ACTION
KEEPS THIS HUMIDIFIER OUT-OF-TROUBLE





DAFFIN Plenum Humidifier mounted on jacket of packaged unit.

Automatic Controls

FIT ALL STANDARD PLUMBING SYSTEMS

Daffin Model 550 *Positive Discharge* Plenum Humidifier for warm air heating systems avoids service difficulties so frequent with other types. Positive output: 3.9 pints per hour. Write for free literature.

TERRITORIES AVAILABLE



Daffin Plenum Humidifier installed with conversion oil burner.

Daffin MANUFACTURING COMPANY
Reg. U.S. Pat. Off. LANCASTER, PENNSYLVANIA

Copper - Brass - Bronze
Perforated
TO YOUR REQUIREMENTS

PERFORATED METALS
FOR ALL INDUSTRIAL USES
ARCHITECTURAL GRILLES
SEND FOR CATALOG #35

DIAMOND MFG. CO.
BOX 34 WYOMING, PA.

ORNAMENTS



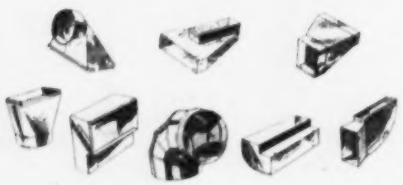
STAMPINGS & SPINNINGS

Zinc Ornaments Available From Stock. Copper, brass, bronze, aluminum and stainless steel ornaments made up promptly.

If you don't have catalog K, send for it NOW.

MILLER & DOING
89 ADAMS STREET BROOKLYN, N. Y.

THE Hugert LINE
QUALITY PIPE AND FITTINGS
COMPLETE TO FIT YOUR NEEDS
PROMPT TO FIT YOUR SCHEDULES
WITH PERFECT FIT ON THE JOB!

FOR COMPLETE FREE CATALOGUE WRITE...
Hugert MANUFACTURING COMPANY
CHIPPEWA LAKE ROAD • MEDINA, OHIO
TELEPHONE • MEDINA 2-8552


appointments . . .

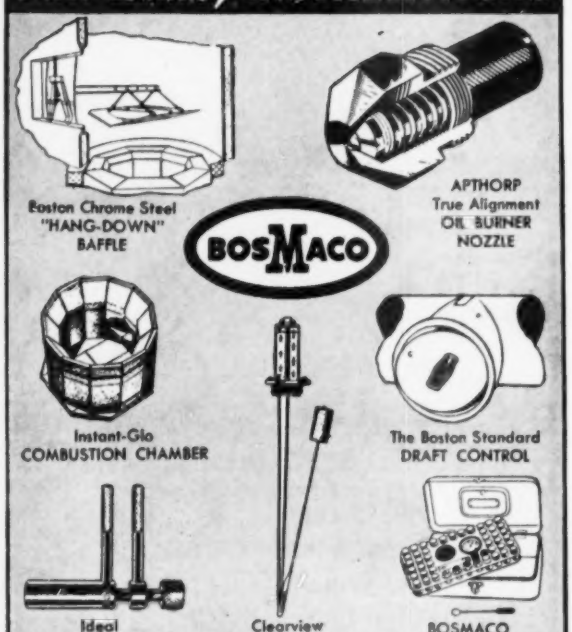
pany's 16 wholesale warehouses. Mr. Deegan joined the company in 1945 as an accountant in the general offices at Savannah, served as assistant branch manager in the Memphis office and was a sales representative just before his recent promotion. Mr. Peek has managed the Memphis warehouse since it was opened in November 1949. Prior to that time he was assistant branch manager of the Savannah warehouse.

RICHARD E. LOEBELL as national sales manager for the new Silent Automatic Products line of gas and oil heating equipment being introduced by The Timken Silent Automatic Div., The Timken-Detroit Axle Co. Mr. Loebell was formerly with Surface Combustion Co. as a researcher and was active in the development, engineering and later in the sale of domestic heating units. Following this, he joined the People's Gas, Light and Coke Co., Chicago, where he was supervisor in charge of sales of equipment for home heating. He has also been branch manager in Milwaukee for Bryant Heating Corp. and was most recently Eastern regional manager for The Ingersoll Products Div., The Borg-Warner Corp.

LEO C. MCROBERTS as market supervisor in the appliance controls division of Minneapolis-Honeywell Regulator Co. He will direct sales of automatic control equipment made in the firm's Los Angeles plant. Mr. McRoberts joined Honeywell in 1946 in the Kansas City

Cut Installation Costs!
One hammer blow permanently rivets


E-Z-ON
E-Z-ON Damper Controls are easily, quickly installed to save you time and money. E-Z-ONS lower initial cost offers you additional savings and extra profits. Start saving money now. . . . Call your jobber today!
LEADING JOBBERS STOCK "EZ-ONS"
In Canada — THERMIDAIRE CORP. LTD. Toronto
M. A. GERETT CORP.
724 WEST WINNEBAGO STREET, MILWAUKEE 5, WISCONSIN

FOR Quality INSTALLATIONS


WRITE FOR COMPLETE INFORMATION
BOSTON MACHINE WORKS COMPANY
Oil Heating Supplies Division, Manufacturers, Lynn, Mass.

NOW is the TIME to "CLEAN-UP"

with a

GRAND RAPIDS FURNACE CLEANER

Act Now! Get in on this year's cleaning profits. *Order a Grand Rapids Furnace Cleaner.*

IT'S FAST—Handles twice as many jobs as the ordinary furnace cleaner.

IT'S THOROUGH—High velocity suction completely removes ashes, soot, scale and dirt from every type of heating plant.

IT'S COMPLETE—A packaged unit with practical cleaning attachments designed for fast, easy cleaning.

IT'S PROFITABLE—The trouble-free operation and speedy service of the Grand Rapids Furnace Cleaner puts extra profits in your pockets.



Send today for complete information about the Grand Rapids Furnace Cleaner.

DOYLE VACUUM CLEANER CO.

227 Stevens St., S.W. Grand Rapids 7, Michigan

WEBCO SHEET METAL BENDING BRAKES



HAND OPERATED WITH SLIP END

This 4 foot portable WEBCO Sheet Metal Bending Brake is a money-making time saver that is indispensable in any shop.

Write for information to:

HALLMOR, Inc.

McMURRAY RD., BRIDGEVILLE, PA.

DIECKMANN CONDUCTOR ELBOWS and SHOES

An ANGLE for every obstacle!

PLAIN ROUND
CORRUGATED ROUND
CORRUGATED SQUARE

Made in 28, 26, and 24 gauge steel hot dipped galvanized after formation.

Sizes from 1" to 6". Angles from 10 degrees to 90 degrees.

Also in Copper, Aluminum and Stainless Steel.

Catalog available from your jobber.

THE FERDINAND DIECKMANN CO.

ESTABLISHED 1871

P.O. STATION B CINCINNATI 22, OHIO

Save money on Multi-blade DAMPERS



Make your Dampers with . . .

DURO-DYNE

PRECISION-ENGINEERED

DAMPER HARDWARE

Note Parallel OR Opposed blade action

- Each blade quickly adjustable
- Tilting brackets line up automatically After Installation (can use inexperienced labor)

for Samples & Prices . . . Write Dept. B

Visit us at BOOTH 2-919 International Heating & Ventilating Exposition

DURO-DYNE CORPORATION

38 South Franklin Street, Hempstead, L. I., N. Y.



It takes skilled and experienced men to roll Angle Rings accurately with uniform curvature! We roll to your specification angles, channels, tees, rods, flat-bars, pipe and tube in an endless variety of sizes and shapes—plain, or punched for riveting or bolting.

Leg out Angle Rings are carried in stock unpunched in many sizes for immediate delivery. Write today for our list of stock sizes and discounts—also our circular describing our complete Fabricating Services.

National Metal Fabricators

2140 So. Sawyer Avenue — Chicago 23, Illinois

OBDYKE

IMPROVED EAVES TROUGH FOR BETTER JOBS



No More Ragged, Sagging Inner Edges

Our hemmed and fluted inner edge combines great strength with safer handling at no extra cost to you. Try it and join the ranks of satisfied users. . .

SEE YOUR JOBBER

BENJAMIN P. OBDYKE, INC.

443-453 N. 8TH. ST. PHILADELPHIA 23

Manufacturers of roof drainage products

appointments . . .

sales office, in 1950 was assigned to the Dallas sales office as sales manager of the wholesale division's southwest region, and prior to his latest promotion was account executive in the Minneapolis office.



Leo C. McRoberts



A. W. Pracker

A. W. PRACKER as factory representative in New York State and Western Pennsylvania for Jackson and Church Co. He will supervise sales of the complete line of upright floor models and suspension furnaces. Mr. Pracker will maintain headquarters at 11204 Parkhurst Dr., Cleveland.

DAVID E. FEINBERG as manager of the United States Air Conditioning Corp., Minneapolis. Mr. Feinberg has been a vice president of the corporation since May 1951, has also served as sales manager of the refrigeration



LA-CO Flux is more active than resin base flux . . . gives greater efficiency . . . dissolves oxides of metals instantly . . . prepares a free and clean surface for a firmer solder union . . . fluxes through rusty or oily surfaces, thereby eliminating unnecessary cleaning. Residue will not absorb moisture. LA-CO Flux (Regular) is NON-ACID . . . SELF-CLEANING.

LA-CO also manufactures special flux for chrome and stainless steel, an electro flux for electrical work and a flux for silver soldering.

A safety feature . . . it prevents acid burns.

Send for descriptive circular and price information.

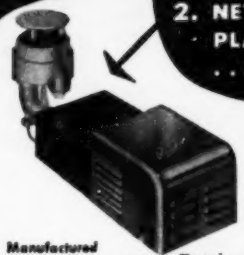
Samples upon request.

LAKE CHEMICAL CO.

3051 W. Carroll Ave., Chicago 12, Ill.

THESE FACTS HAVE MADE
Reinhard
GAS CONVERSION BURNERS FAMOUS!

1. NEVER A HEAD REPLACED . . .
2. NEVER A BAFFLE PLATE REPLACED . . . . . Due to Burning Out.



Manufactured since 1932

At the show Booth No. 129

The "Air Lock" principle is an exclusive feature found only in Reinhard Burners.

The extreme efficiency, simplicity of installation and long life are backed by the strong Reinhard Guarantee. No fans, blowers or ceramics are used. The Reinhard line includes domestic, industrial and commercial gas conversion burners. Write for FREE folder.

Laharco Industries
LYNDALE AND 2ND AVE. N. • MINNEAPOLIS, MINN.

KENT
Double Suction
FURNACE CLEANER

You can't make profits without performance — and that's where KENT shines! Two fans mean high vacuum, high air movement . . . low RPM of motor means long life. No outside dustbag, no dust passes through fans . . . low center of gravity, less chance of tipping. Convince yourself: it pays to buy a good tool!

Don't decide till you see the KENT!

See us at Booth 535 Heating and Ventilating Show Jan. 26-30 — Chicago



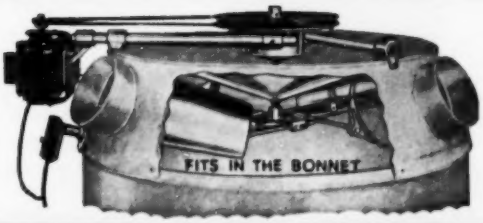
Carries easily — base weighs only 39 pounds, dirt can only 24 pounds!

Full information upon request

CLEAN WITH KENT EQUIPMENT

The KENT Company, Inc. • 435 Canal St. • Rome, N. Y.

Convert Gravity Furnaces With A
CIRCULATAIRE Bonnet Blower



CIRCULATAIRE ELIMINATES COLD ROOMS, BALANCES HEAT DISTRIBUTION, SAVES FUEL

CIRCULATAIRE solves the problem of "hard to heat" rooms, boosts warm air quickly through all the heating pipes. CIRCULATAIRE is easily and quickly installed without removing the bonnet. Packaged unit includes motor and fan control. No new sheet metal work required, no changing of cold or warm air pipes, no baffles to be built. The CIRCULATAIRE is rigid, quiet and efficient in operation.

NOW READY — *New CIRCULATAIRE Sales Aids add effectiveness to selling interview, conserves valuable selling time and increases sales.*

A COMPLETELY PACKAGED UNIT
Nothing for the dealer to furnish except limited amount of labor.



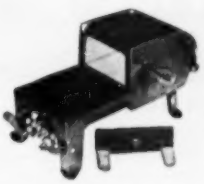
GET THE FACTS TODAY! WRITE...
CIRCULATAIRE DIVISION OF CORLETT-TURNER CO.
1001 S. KOSTNER AVE., CHICAGO 24.

MORE HEAT FOR YOUR DOLLAR
WITH JOHNSON BENCH SOLDERING FURNACES

1800°F. without forced air blast.

No. 101 Bench Furnace

The most efficient, powerful and economical bench furnace made for heating soldering coppers up to 12 lbs. per pair. Also used for heat treating, case hardening, and annealing carbon steels. Two burners. Firebox 3¾ x 4½ x 5½. Complete with work rest block and baffle plate. $18.80 F.O.B. factory.



No. 118 Combination Bench Furnace

For heating largest soldering coppers, stenciling irons, branding irons, etc.; heat treating carbon steels, and soft metal melting. Lid on hood is removable for inserting 22 lb. pot for melting lead, tin, babbitt, etc. Three burners. Firebox 6¼ x 5 x 6½. Complete with pot. $35.00 F.O.B. factory.



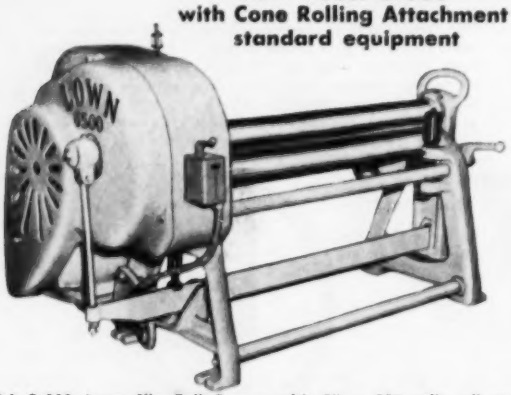
WRITE FOR FREE LITERATURE

JOHNSON GAS APPLIANCE CO.
580 E AVENUE N.W. CEDAR RAPIDS, IOWA

Announcing another

LOWN SLIP ROLL FORMING MACHINE

New Model G-500
with Cone Rolling Attachment
standard equipment



Model G-550 Lown Slip Roll Former with 5" x 50" rolls, all power driven

A new improved modern design, engineered for durability, strength and service.

- **Initial Pinch Type — Alemite Lubrication**
- **Capacity Model B-550, 8 - 10 gauge 4' wide. (Available in shorter or longer lengths)**
- **Quick Acting Latch on Drop Arm.**
- **Handwheel Adjustment of Rear Roll.**
- **Roll Position Indicators.**
- **Oilite Bearings — One-piece Gear Housing.**
- **Fast, sturdy, easy to operate.**
- **Prompt Deliveries.**
- **Other machines with 2" to 9" dia. rolls also available.**

Dealers in Principal Cities ***Write for Bulletins—Mention this Ad***

SAN ANGELO FOUNDRY & MACHINE COMPANY

San Angelo, Texas **1000 East Upton**

DON'T WORK SO HARD!

USE VISE-GRIP HAND TOOLS



No. 8, 8" $2.95

VISE-GRIP Sheet Metal Tool

You completely eliminate tiresome hand gripping! VISE-GRIP Sheet Metal Tool locks to work with Tremendous Grip. Won't slip! Easily adjusts to Non-Locking Action. Ideal for locking templates, crimping edges, etc. A real Work-Saver on ANY job! Adjusts in a second to thick work or thin by turning End Screw. Deep 1¾" reach adapts tool to any size work.

VISE-GRIP Wrench

Locks to work with Ton-Grip! No other tool does so much so easily! Both 7" and 10".



No. 10-W $2.60

VISE-GRIP Welding Clamp

LOCKS parts in Perfect Alignment!



No. 9, 9" $2.95

Order from your supplier!

Manufactured Only By

PETERSEN MFG. CO., INC.

Dept. AA-1 DeWitt, Nebr.

appointments . . .

division and as coordinator of the company's defense production activities.

EARLE H. SCHLITT, formerly a project engineer for Wolff & Munier, contractors, has joined the air conditioning sales department of the Trane Co. He will specialize in air conditioning systems for multi-room structures.

JAMES F. DONNELLY as vice president in charge of sales for Servel, Inc. Mr. Donnelly was formerly assistant general manager of the A. O. Smith Corp. water heater division.

HEARN PLUMBING AND HEATING, INC., 246 N. Fourth Ave., Tucson and The Standard Sheet Metal Works, 512 E. Jefferson St., Phoenix, as Arizona distributors of Servel air conditioning equipment.

GEORGE W. BAKER as sales engineer in the Indianapolis office of Dravo Corp. Previously he was engaged in the sale of Dravo products and services for the Machinery Div. in the Pittsburgh territory. In his new position he will handle the sale and application of direct fired space heaters.

WILLIAM B. COTT as manager of air conditioning application engineering for the Sturtevant Div., Westinghouse Electric Corporation. Mr. Cott was previously em-

ORAN offers the unique NEW DUAL-AIR vaporizing burner in ALL Shallo-Well Oil Fired floor furnaces



Underwriters' Listed

Only 34" deep, NO GROUND CLEARANCE NEEDED!

Oran's amazing, new Dual-Air vaporizing burner is one of the greatest advancements ever made in vaporizing-type burners. This unique unit burns smoke-free, even under adverse draft conditions, with oil savings up to 15%!

There are four Oran Shallo-Well models for small homes, to meet climatic conditions anywhere in the nation. They are available in ratings of 50,000, 65,000 and 75,000 BTU.

Besides our complete line of famous oil fired floor furnaces, Oran Company also manufactures a complete line of gas fired floor furnaces, and oil and gas fired central heating systems.

WRITE TODAY FOR FULL INFORMATION!

ORAN COMPANY

2220 S. Third St., Columbus 7, Ohio

ORAN

TRIANGLE
PILLOW BLOCK



SHOCK-ABSORBING BUILT-IN CUSHIONS

- For fans, blowers and other devices requiring self lubrication—perfect alignment—silent operation.
- Low prices include built-in, non-hardening cushions. It's all in the ball—no extra parts to buy or handle!

Special Mountings Designed To Meet Specific Needs

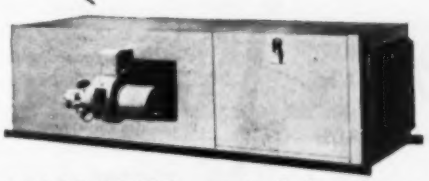


Triangle Bridge-Tree Type Pillow Block

TRIANGLE MANUFACTURING COMPANY
392 DIVISION ST. OSHKOSH, WIS.

QUIET AUTOMATIC
OIL FURNACES

SUSPENDED
Or Laydown Air Conditioning
FURNACES



SPACE SAVER...and a Labor Saver

It comes completely assembled including combustion chamber. For Garages, Service Stations, and Basementless Homes. Made in sizes from 75,000 BTU to 600,000 BTU.

Approved by Leading Oil Companies, Underwriters and Municipalities. WRITE TODAY FOR FULL DETAILS

A PRODUCT OF
QUIET AUTOMATIC BURNER CORP.
J. G. KAVENY, *President*
33-35 BLOOMFIELD AVE. NEWARK 4, N. J.

SALES MANAGERS WANTED

Can you sell the new Silent Automatic line of home heating equipment to leading wholesalers?

See Announcement Advertisement in This Issue

If you are sure you can qualify, mail a resume of your experience and qualifications to R. E. Loebell, national sales manager — Silent Automatic Products, Timken Silent Automatic Division, Jackson, Michigan.

THE RIGHT SHEARS FOR ANY CUTTING JOB

MARSHALLTOWN



ROTARY THROATLESS SHEARS

CUTS ALL SHAPES—SIZES
- QUICKER
- EASIER
- FASTER

Here's a shears that's right for every job. Speedy — efficient. Cuts up to ¼ inch stock — speed to 6 ft. per minute. Excellent for irregular cutting or straight splitting. Available in hand operated or motorized models. Prompt shipment. Send today for special illustrated bulletin.

MARSHALLTOWN MFG. CO.
Marshalltown, Iowa

Viking

● THE ORIGINAL COMPOUND **SHEAR**

APPLIES THE STRENGTH OF *20* MEN AT THE BLADE



Cuts without kinking as easily as a tailor's shears thru cloth.
- Cuts Band Iron
- ½" Brass (any width)
- Copper, Sheet Iron Tin, Band Saws (any thickness or width)
- 12 Gauge Bessemer Steel

OVERALL LENGTH 34" · WEIGHT 22 LBS.
IMMEDIATE DELIVERY $29.00

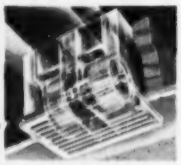
VIKING SHEAR COMPANY
1065 W. 20th ST. • ERIE, PA.

TRADE-WIND

ADVANCED MODELS FOR EVERY KITCHEN AND ALL SMALL ROOMS

CLIPPER VENTILATORS

MODEL 2501 for Large Kitchens, Laundries, Game Rooms



Two centrifugal blowers with motor isolated from greasy air stream. Dripless grille. 2-speed switch. Interchangeable discharge. 425 CFM certified.

MODEL 3501 for Kitchen Cabinet Installation



Two inlets at stove and ceiling level each with washable filters. Two centrifugal blowers delivery 550 CFM certified. 2-speed switch. Hood optional.

MODEL 1501 for Average Kitchens, Laundries, Dens



This is the sensational new double centrifugal blower model. Interchangeable discharge. 300 CFM certified. Motor entirely outside air stream. Dripless grille. 2-speed switch available.

MODEL 1201 with Automatic Switch for Bathrooms



Single centrifugal blower. 100 CFM certified. Built-in backdraft damper. Available with automatic time switch which turns off unit after 30 minutes or less.

TRADE-WIND MOTORFANS, INC.
5717 So. Main St., Los Angeles 37, Calif.

Please send complete information on all Trade-Wind Clipper Models.

Name _____

Address _____

appointments . . .

ployed by the Carmichael Construction Co., Akron, Ohio, and the Doerman Rocher Co., Cincinnati, on air conditioning engineering and sales.

Mr. Cott fills a post left vacant by the death of Tolbert Earl Smith.

Alex U. Steenrod

ALEX U. STEENROD, steel building products sales manager for the Berger Mfg. Div., Republic Steel Corp., died December 10 in Columbus, Ohio.

Mr. Steenrod, 62, was born in Wheeling, W. Va. He was a sales manager for Berger since 1944. Prior to that he was associated with the Milcor Steel Co., in Canton, Ohio, and Chicago.

Mr. Steenrod is survived by a daughter and two brothers.

John A. Ingwersen

JOHN A. INGWERSEN, vice president in charge of distribution, Armco Steel Corp., died unexpectedly of a heart attack at his home in Middletown, Ohio, on December 5. Mr. Ingwersen joined Armco in 1923, became manager of midwestern sales in 1939 and also served as manager of sheet and strip sales and as general manager of sales. In 1947 he was elected vice president in

the NAME that MEANS what it SAYS!

TiNiT



AT LOWEST TEMPERATURES

TINS and CLEANS ALL METALS IN ONE OPERATION

Cleans, tins, fluxes; flows into joints, bends, corners; penetrates rust, paint and grease.

Other TINIT products: Soldering Salts, Paste, Welding and Brazing Fluxes, Tinit Hand Cleaner.

Ask your jobber or write for details

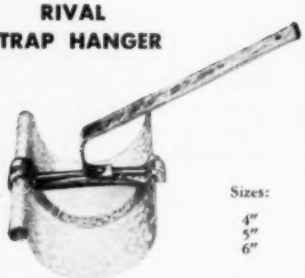
TINIT MFG., CO., INC. 1635 Platte St. Denver, Colo.

-BB- COPPER AGAIN AVAILABLE in

NO. 100 SNOW GUARD



RIVAL STRAP HANGER



Sizes: 4" 5" 6"

SOLD THRU LEADING JOBBERS EVERYWHERE

BERGER BROS. CO.

229-237 Arch Street Philadelphia 6, Pa.

THOR QUALITY TOOLS



ARE TIME AND MONEY SAVERS IN HEATING AND VENTILATING DUCT WORK

THOR GOVERNMENT LOCK DIES

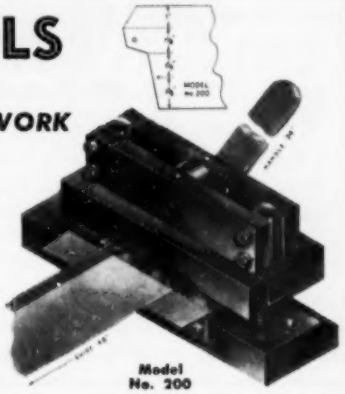
shear — punch a 5/32" hole — and mark point at breakline all in one operation. No waste of time for punch press set-up.

Model No. 100, Capacity 22 ga. $ 95.00
Model No. 200, Capacity 18 ga. $160.00

THOR UNIVERSAL CLIP PUNCH — Model No. 300
Capacity: 3 sheets of 20 ga. mild steel. A fast, efficient tool for fastening government locks and standing seams in all kinds of sheet metal work. Price $35.00

See your local dealer or write for literature and samples of metal sheared in above tools.

Thor Tool and Die Co., 865 Estabrook St., San Leandro, Calif.



MILTON SHEET METAL MACHINERY SPECIALISTS

STOCK DELIVERY ON PEXTO, CHICAGO BRAKES, DIACRO, ROUSSELLE PRESSES, KIDDER, WHITNEY, ROTEX PUNCHES, REX WELDERS

WE CARRY A COMPLETE STOCK OF NEW & USED HAND & POWER MACHINERY.

WE STOCK PUNCHES & DIES & ADAPTERS FOR ALL PRESSES & BRAKE DIES, SHEAR BLADES & SPOT WELDER-TIPS & HAND TOOLS.

MILTON EQUIPMENT COMPANY

N.E. COR. 4th & Race St. Phila. 6, Pa.

WAlnut 2-1734

A REAL PROFIT MAKER...

Add germ control to heating and air conditioning sales.



Glycolator ---- reduces air-borne bacteria and viruses, thus reducing colds and other respiratory diseases.



FURNACE MODEL
Mounts easily on forced air stack. Low cost; thermostatically controlled. Treats up to 20,000 cu. ft. of air per hour.

THE REGAL PORTABLE
Fully automatic, lightweight, fan dispersion. Treats up to 100,000 cu. ft. of air per hour.

LARGE CAPACITY, COMMERCIAL MODELS AVAILABLE.
For complete information, prices and available dealer or distributor territories, write:

Glycolator Valencia, Pa. Dept. A-1

How you can speed up your Work —without an 8' or 10' Square Shear

ALMAR EASY SLITTER

FOR USE WITH BRAKE OR BENCH

The Rotary action of cutters produces a neat, accurate clean edge.





PRICE—COMPLETE
Almar Easy Slitter
with cutting head & track

8'	Brake Type	—	$75.00
8'	Bench Type	—	$85.00
10'	Brake Type	—	$85.00
10'	Bench Type	—	$95.00

F O B —Chicago, Ill.

WARD MACHINERY CO.
564 W. WASHINGTON BLVD CHICAGO 6, ILLINOIS

RIVAL STRAP CORP.

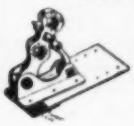
308 West 20th Street New York 11, N. Y.



3", 4", 5" Sizes — 2", 3", 4" Sizes

"Rival" & Fitrite" Ornamental Leader Straps — Copper & Zinc in 6 styles SOLD THROUGH JOBBERS ONLY

ADJUSTABLE PIPE SNOW GUARDS



"FITRITE" 3 Pipes, ¾" I.P.S. For all types of steep roofs



"PROTECTOR" 2 Pipes, ½" I.P.S. For smaller roofs, new or old.

"FITRITE" SKYLIGHT GEARING



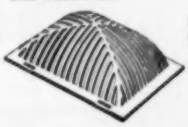
⅜", ½", 1" Hook or chain operation ⅓" Gearing assembled on 20" pipe

"FITRITE" ROOF STRAINERS

Bronze and Aluminum



BEEHIVE 3"-8" round. Also 3" x 4", 4" x 5" square



3 Types 6", 8", 10", 12" square

"FITRITE" 3-WAY CLAMP

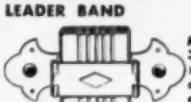
A New Vise-Grip Made Exclusively For Us



Portable Electric
SAW GUN



"FITRITE" CAST BRONZE HINGED LEADER BAND



Made for 3" & 4" square corrugated also 3" & 4" round

"FITRITE" ADJUSTABLE SWING CHIMNEY JACK FRAME



Five sizes in one For 6"-10" pipe.

To Protect Trade Please Use Printed Stationery

DAVID LEVOW 308 West 20 ST NEW YORK, 11 TELEPHONE CHELSEA 3-2400-2401

See our CATALOG in SWEET'S FILE

charge of distribution, the position he held at the time of his death.

W. W. Roberts

W. W. ROBERTS, assistant manager The Certified Furnace Co., division of Stainless & Steel Products Co., died on November 21. Mr. Roberts had been active in the heating industry for a number of years.

Harold M. Thorell

HAROLD M. THORELL, sales manager of Trade-Wind Motorfans, Inc., died on November 18. He had been with the firm since 1945 and was named sales manager six years ago. Mr. Thorell was an active member of the Southern California chapter of the American Society of Heating and Ventilating Engineers.

Charles G. Atkin

CHARLES G. ATKIN, vice president and general manager of the Barber Gas Burner Co., Cleveland, Ohio, died on December 5. Mr. Atkin, also president of the Osborn Engineering Co., was formerly employed in the New York State architect's office. He is survived by his wife, Dorothy, daughter of the founder of the Barber Gas Burner Co., two daughters, his parents and two grandchildren.



RID-ALL

The finest incinerator made at a price your customers can afford. No Gas required. Write for literature and prices.

A Scientifically Engineered Unit

SCHWAB FURNACE CO.

332 W. Florida St. Milwaukee 4, Wis.



FOR PERFECT SOLDERING

and GREATER PROFITS

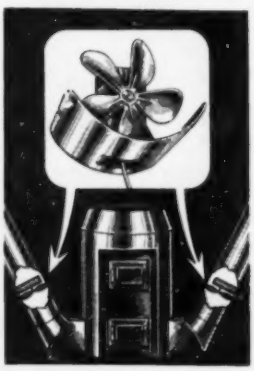


in less time use Rubyfluid, the fast acting easy-to-use soldering flux that wets out freely, properly conditions metal for a strong union. No objectionable or harmful fumes. See your jobber or write direct for special $1.00 offer.

RUBY CHEMICAL CO.
S. McDowell St. Columbus 8, Ohio

Rubyfluid

FORCED AIR FOR UNDER $100



Good Profits for Dealers

Don't lose forced air conversions because of price. If your buyer cannot afford a large blower, sell him the McLarty System. Can be installed in nearly all gravity air jobs for under $100 and shows you a good quick profit. No sheet metal work required, plugs into 110v. A.C. outlet, installs in a couple of hours. Gives results comparable to systems much more expensive. Pays for itself in fuel savings. Write for details on this easy way to pick up more forced air sales and profits.

McLARTY SYSTEMS
2601 Dickman Rd. — Battle Creek, Mich.

KIRK-BLUM



...one piece BLOW PIPE ELBOW SAVES YOU MONEY

- HOODS
- BALL JOINTS
- FLOOR SWEEPS • BLAST GATES
- STAMPED AND ROLLED ANGLE RINGS

Cheaper and stronger than the ordinary pieced elbow, KIRK & BLUM'S One-Piece Elbows are rolled into a tube, then crimped on an exclusive machine to form a super tight, rigid elbow. These and other blow pipe parts, made in production quantities, are superior, cost less than the ordinary kind. Made in light to heavy gauges, from 3-inch to 14-inch diameter. Write for literature and prices.

Ball Joints Any Size

THE KIRK & BLUM MANUFACTURING CO.
3180 FORRER ST. • CINCINNATI 9, OHIO

MANUFACTURERS OF

FURNACE PIPE AND FITTINGS,



Prefabricated Ducts,

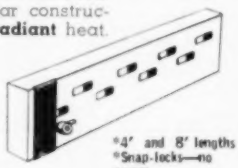
also conductor pipe, eaves trough, drip edge, rake strip, etc.

THOR METAL PRODUCTS CO., INC.
Box 118 Eastwood Station Syracuse, N. Y.

Yes, You Saw it in "House & Home"!

VECTAIRE ★ **Warm-air Base board**

Here's heat in a hurry where it's needed. For slab, crawl-space, or cellar construction. Delivers convected and **radiant** heat. Non-smudging. Pictured in November issue **House and Home** magazine. Designed for 4" and 5" duct systems. One 8' length handles up to 10,000 BTU's. **FREE:** Vectaire time-saving, 30-second calculator. Sizes and figures the job.



*4' and 8' lengths
*Snap-locks—no screws.
*Built-in Air Controls.

VECTAIRE MANUFACTURING COMPANY
251 Howard Street, Melrose 76, Massachusetts

ORIGINAL REPAIR PARTS for FURNACES PUT OUT BY
AMERICAN FURNACE & FOUNDRY CO.
MARSHALL FURNACE CO.
MONITOR FURNACE CO.
RUDY FURNACE CO.

also

Repairs for other makes such as: PENINSULAR, LAUREL, GARLAND, HOME, HOLLAND, KALAMAZOO, JEWEL, IDEAL, HOMER, WILLIAMSON, AGRICOLA, ETC.

Phone 5322 — Write — Wire

LIVINGSTON, INC., MARSHALL MICHIGAN

Your warm air heating supply house

PENN-AIRE FURNACES

WINTER AIR CONDITIONING AND GRAVITY

CAST IRON — COAL FIRED

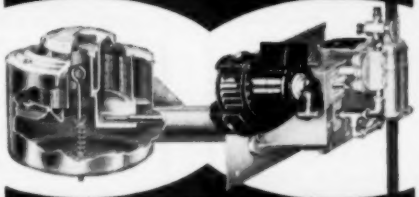
Popular Priced
Practical Design
Economical Operation

UNION MFG. CO., INC.

Boyertown, Pa.



BURNERS designed to O E M units

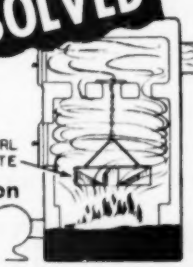


THE MILLER COMPANY · MERIDEN · CONN
Heating Products Division

NEW! GAS PILOT
Increase furnace sales to small homes with Miller Flange-Mounted Vaporizing oil burners.
Write for sample

miller
SINCE 1844

YOUR BAFFLING PROBLEM SOLVED



With the Only Swirling Action

BAFFLE PLATE

GET THE FACTS — CONTACT YOUR JOBBER OR WRITE TO

FIRE-SWIRL ZEH COMPANY INC., PASSAIC, N.J.

ADAMS

Clean-Out Door

(Cast Iron)

Sizes: 5x7 ins.

to 30x24 ins.



Buy Adams Known Quality

THE ADAMS COMPANY

BRIDGE STREET • Established 1883 • DUBUQUE, IOWA

CLASSIFIED ADVERTISING

***Classified Section:** Rates for classified advertising are 10 cents for each word, including heading and address. One inch $5.00. Count seven words for keyed address. Minimum $2.00 for each insertion. Cash must accompany order.*

lines wanted

WANTED: Well rated Philadelphia firm handling large volume of operation business desires distributorship for a quality line of residential air conditioning equipment. Have complete engineering and service set-up. Address Key 927, American Artisan, 6 No. Michigan Avenue, Chicago 2, Ill.

for sale

Foundry and sheet metal shop complete with patterns and flasks. For the manufacture of the United States Coal and Gas Furnace. List of customers for 27 years, office and trucks — ready to go, over 14,000 Ft floor space, long lease at $350.00 per month. Priced at $20,000.00. Write Edward J. Ludt, 3204 Hubbard Rd., Youngstown, Ohio.

wanted

WANTED: Shearing any amount — all sizes. Galvanized, cold and hot rolled aluminum. Stainless and copper 6" minimum width 36" minimum length, uniform quantities. Gauges from 16 to 30 inclusive.

Write or wire

Los Angeles Sheet Metal Mfg. Co.
901-903 East 9th Street, Los Angeles 21, Calif.
Trinity 4713

agents wanted

National Manufacturer of warm air radiant baseboard has many fine territories open for aggressive manufacturers representatives who are willing to promote our product at the dealer level. We have provided for your selling to distributors, and have a very attractive offer if you are a worker. Address Key 928, American Artisan, 6 No. Michigan Avenue, Chicago 2, Ill.

Sales Representative Wanted — Michigan, Minnesota, Missouri, Ohio and some other good exclusive territories available. Must be capable of selling our service to heating, air conditioning, and refrigeration trades. Also to national users of heating and refrigeration equipment. Long established mid-western firm. Repeat orders, commission basis. Very profitable for man able to handle this since it is a service to the trade very much in demand today. Address Key 881, American Artisan, 6 No. Michigan Avenue, Chicago 2, Ill.

SERVICE SECTION

These pages represent an ideal opportunity for manufacturers to get their messages across to readers of a national publication in their field. Whatever you make or sell, you'll find a large, receptive audience, easily reached at a minimum outlay. Plan now to move your products quickly and economically with consistent advertisements in this section.

Rates for display space in the Service Section are $10.00 per inch per insertion. One-inch minimum space accepted. Closing date — twentieth of the month preceding issue.

Manufacturers' Agents

Are you interested in securing additional lines?

We are occasionally asked by our manufacturer advertisers to suggest the names of manufacturers' agents in various sections of the country whom they can contact in regard to representation of their residential heating, air conditioning, and sheet metal products.

If you would like your name listed in our records for inquiries we may receive on your territory, we invite you to write us. There is no charge in connection with this service.

AMERICAN ARTISAN

6 N. Michigan Ave. Chicago 2, Ill.

"... your time is money!"

..... so why should you waste it by looking around for items or personnel to make your organization more efficient? A simple classified advertisement in American Artisan will turn the trick for you quickly and at low cost. No matter what you need or have to sell one of our readers will have it or want it.

Rates are shown on preceding page.

closing date is the twentieth of the month preceding issue.

Let's hear from you!

Now Beginning Our 120th Year...

This year marks the 120th anniversary of the time when William F. Potts opened his "Iron Store and Warehouse" at 1225 Market Street, in Philadelphia. From that small but sound beginning . . . through good times and bad . . . through changes in name but not in principle . . . the business has grown to its present high stature of leadership among others of its kind.

Today, the Potts-Farrington Company operates one of the largest and most modern warehouses — a giant storeroom of metals, metal products and specialties, plus a tremendous capacity for service that has won a legion of loyal customers throughout the Nation.

Everything for the Sheet Metal Trades

ALUMINUM SHEETS AND ROOFING • COPPER • ZINC • STAINLESS STEEL • TIN AND TERNE PLATE • HOT GALVANIZED ANGLES, BANDS, FLATS, ROUNDS • BAR SIZE STRUCTURALS • EXPANDED METAL • AND MANY, MANY OTHERS, INCLUDING NAILS OF EVERY KIND.

In Stock for Immediate Delivery

POTTS-FARRINGTON CO.

FORMERLY W. F. POTTS, SONS & CO., INC.

4250 WISSAHICKON AVE., PHILADELPHIA 29

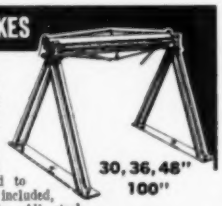
PHONE BAldwin 3-1000





SERVICE SECTION

FOLDING BRAKES

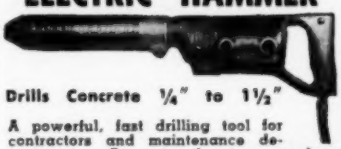


Easily forms angles, channels, Pittsburgh locks and all kinds of flanges, vees, nees. Handle 24, 26, 28 gauge mild steel and heavier aluminum and copper. Can be bolted to bench or truck or on included, 32" high floor stand. All steel construction. Shipped Express or Freight collect. 30" size, 95 lbs., $35.50. 36", 105 lbs., $40.00. 48", 135 lbs., $56.00.

Order direct, cash or C.O.D., or send for folder

VYKE BRAKE CO.,
T-3016 Leavenworth, Omaha 5, Nebr.

WODACK "DO-ALL"® ELECTRIC HAMMER



Drills Concrete ¼" to 1½"

A powerful, fast drilling tool for contractors and maintenance departments. Separate the two members and it's a heavy duty ⅜" electric drill. TWO TOOLS IN ONE. Star drills in 20 diameters and 20 other hammer tools for chipping, grooving, etc. Saves man hours. Speeds up work — 12 to 15 times faster than with hand tools.

Ask for the New Bulletin 510-AA

Wodack® Electric Tool Corp.
4627 W. Huron St. Chicago 44, Ill.

ACCURATE REVOLVING VENTILATORS



Proved by years of tests and over half-a-million installations. Used for better chimney draft and down-draft prevention. Absolutely rain and storm proof.

Sizes for all chimney top and ventilation work. 3" to 36"

Stocked by leading jobbers everywhere

Write for catalog and prices

ACCURATE SHEET METAL & MFG. WORKS
2338-40 Milwaukee Ave. Chicago 47, Ill.

. . . the blood bank is low!

. . . the need is desperate!

What Happened to That Pint of Blood YOU Were Going to Give

ALL STYLES **SKYLIGHTS** ALL SIZES

WILLIS SKYLIGHTS are designed to give a maximum of light with perfect ventilation. Constant improvement for over forty years, guarantees WILLIS customers greater value, both in construction and workmanship.

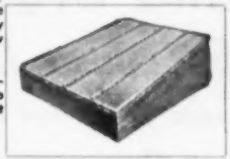
Willis skylights are constructed with condensation gutters on all bars and at the eaves to carry away the moisture. They are water-tight without the use of putty and are easily installed on old or new buildings.



NO. 705

Our engineering department will be glad to assist you in your skylight problems.

SEND FOR CATALOG



NO. 505

WILLIS STEEL CORPORATION - - Galesburg, Illinois
Established in 1891



A TIME SAVER
CHAMPION DRAW ACTION PIPE CRIMPER

Length—14 Inches Weight—one lb. 10 oz. Crimps plain round, square and rectangular pipe—quickly, perfectly and easily. Can be used in the shop or carried conveniently in the tool kit to outside jobs. Appreciated by those who install warm air furnace pipe, wall stacks, air ducts, smoke conductor and water heated vent pipe, etc. Price $3.50 f.o.b. Factory. A tool of real merit, in fact "it's clever."

Jobbers and Installers: Write for full details today

Champion Tool Company
4261 So. Broadway, Los Angeles 37, Calif.

TIME SAVING TOOLS

For Sale by

A. R. HARRIS

4548 Hohman Avenue - Hammond, Indiana

Portable 4' & 1' Hand Brakes
Tables or Benches-13" Extended 10'
Adjustable Ladder Brackets-Side & Corners
Quick Action Clamps-Welding & Sheet Metal,
Various Vise Grips & Snips,
Do-Mor Saw Handles & Blades,
Awls — Screw Drivers, or Various other Tools
Unbreakable Rules — Precision Metal Miters

Write for Prices & Availability — Dept. 2

THE BESCO BENCH SHEAR



is POWER DRIVEN
will SPEED UP YOUR PRODUCTION
can INCREASE YOUR PROFITS
is MOUNTED IN THE WORKBENCH
will CUT ANY LENGTH—IT'S THROATLESS
can SHEAR ON STRAIGHT OR CONTOUR LINES
has a MAXIMUM CAPACITY OF 18 GAUGE (mild steel)
is LOW IN COST & HIGH IN VALUE
is SMALL & COMPACT WEIGHS ONLY 6¼ lbs.
WARRANTS YOUR INVESTIGATION TODAY

Write now for literature and further information

BESCO MFG. CO.
BOX 1163-A CINCINNATI 1, OHIO

CAPTURING THE MISSING LINK AND KILLING THE BUGABOO OF AIR DISTRIBUTION

can be done easily with handy folder on how to estimate heat loss, air requirements and equipment capacities for forced warm air winter air conditioning systems. Also tells how to design and size entire trunk systems branches, risers, stack-heads and registers and grilles. Price one dollar. Write to

JOSEPH G. STALB RIDGEFIELD, CONN.

SHEET METAL MACHINES & TOOLS

• BETT-MARR BANDSAWS • LOCKFORMERS



• PEXTO SHEARS, ROLLS AND FOLDERS • CHICAGO HAND BRAKES • WHITNEY TOOLS • WYSONG & MILES POWER SHEARS • REED ROLLS • BIRDSELL WELDERS • WILDER SLITTERS

Prompt Shipment — Send for Catalog

WHEN IN CHICAGO VISIT OUR MACHINERY SHOW ROOM

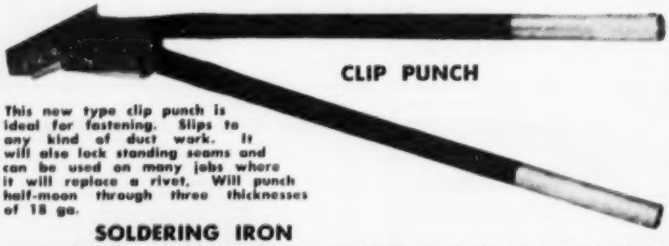
CENTRAL-WEST MACHINERY CO.
335 S. WESTERN AVE., HAYMARKET 1-0900, CHICAGO 12, ILL.

SERVICE SECTION

THE RIGHT TOOLS MEAN MORE and BIGGER PROFITS . . .

Get them from REINER & CAMPBELL

WRITE TODAY FOR LITERATURE ON OUR COMPLETE LINE.

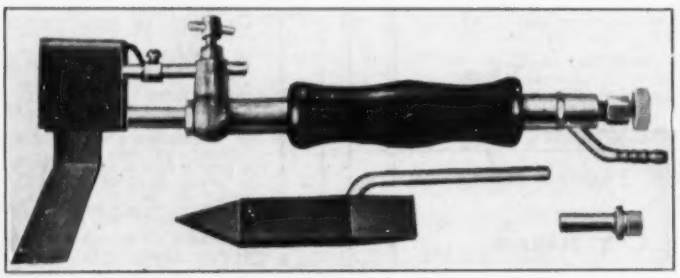


CLIP PUNCH

This new type clip punch is ideal for fastening. Slips to any kind of duct work. It will also lock standing seams and can be used on many jobs where it will replace a rivet. Will punch half-moon through three thicknesses of 18 ga.

SOLDERING IRON

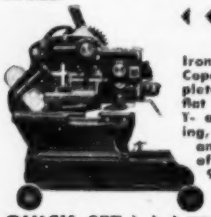
Hot iron in one minute with any acetylene gas having a pressure of five pounds or more. Always the right amount of heat for heaviest as well as lightest soldering job.





SOLDERING OUTFIT ▸▸▸

Will give you hot soldering iron in one minute—Solders eight hours for 10c—Right amount of heat—No changing of irons—Make your own fuel from water and carbide.



◂◂◂ VICTORIA IRON WORKER SHEAR

Iron Worker Shear with built-in Coper, Notcher and Bar-Cutter. Complete with knives for sheet steel, flat bars, round and square bars, T- and L- iron, and cutters for coping, mounted on carriage. Accurate and clean shearing of sheet metal of any length and width. Weighs 956 lbs.

QUICK SET ▸▸▸ DIVIDERS

Quick Set Dividers are the fastest and quickest setting dividers on the market. Circles up to 48". Steel points removable; pencil may be inserted. No center punch required when working on metal.





◂◂◂ DRIVE CLEAT NOTCHER

For notching drive cleats up to 3 in. in width, 22-ga. or lighter. Can be operated by hand or foot or can be easily mounted on the bench or on the job with clamps or bolts and screws.

REINER & CAMPBELL CO., INC.

Post Office Box 5035 — Newark 5, N. J.

SHEET METAL WORKING MACHINERY & TOOLS, NEW and USED

ADJUSTABLE ELBOWS

Registers and Grilles
Deliveries from Stock



Juniper Elbow Co. Inc.
72-15 Metropolitan Ave.
Middle Village, L.I., N.Y.



RUBBER LADDER SHOES
for safe climbing
$2.95 per pair
JOHNSON LADDER SHOE CO.
Eau Claire, Wisconsin

Increase Production with a Birks Pittsburgh Lock Seam Opener
Opens Curved Or Straight Sections For Easy Assembling





Easy To Operate
Only $45.00 Complete

Prevents Injury
F.O.B. Factory

Birks Mfg. Co. — 811 Hanover Road — Meriden, Conn.

NOW THIS BARTLETT



No. 19 Compound Lever Shear cuts 14 gauge easily. Weighs only 3½ lbs. 20 in. overall. 2¼ in. cut.

Bartlett drop forged compound lever snips are made in 8-10-12-14 inch sizes.

Write for descriptive catalog page and folder on Compound Lever Snips and Bench Shears.

BARTLETT MANUFACTURING COMPANY
Box 55, 3003 E. GRAND BLVD.
DETROIT 2, MICH.



At your age!

If you are over 21 (or under 101) it's none too soon for you to follow the example of our hero, Ed Parmalee, and face the life-saving facts about cancer as presented in our new film "Man Alive!". You'll learn, too, that cancer is not unlike serious engine trouble—it usually gives you a warning:

(1) any sore that does not heal (2) a lump or thickening, in the breast or elsewhere (3) unusual bleeding or discharge (4) any change in a wart or mole (5) persistent indigestion or difficulty in swallowing (6) persistent hoarseness or cough (7) any change in normal bowel habits.
While these may not *always* mean cancer, any one of them should mean a visit to your doctor.
Most cancers are curable but *only* if treated in time!

You and Ed will also learn that until science finds a cure for *all* cancers your best "insurance" is a thorough health examination every year, no matter how well you may feel—twice a year if you are a man over 45 or a woman over 35.

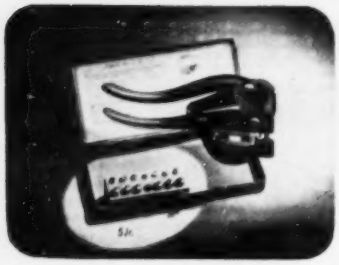
For information on where you can see this film, call us or write to "Cancer" in care of your local Post Office.

American Cancer Society

MAN ALIVE! is the story of Ed Parmalee, whose fear weakens his judgment. He uses denial, sarcasm and anger in a delightful fashion to avoid having his car properly serviced and to avoid going to a doctor to have a symptom checked that may mean cancer. He finally learns what a difference it makes (in his peace of mind and in his disposition) to know how he can best guard himself and his family against death from cancer.

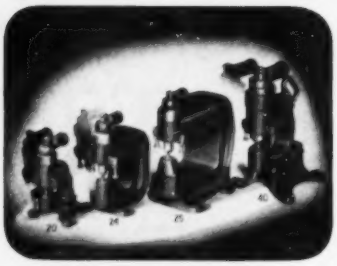
WHITNEY-JENSEN TOOLS

44 YEARS EXPERIENCE



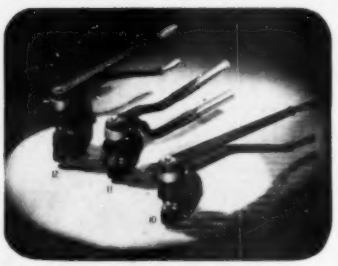
No. 5 Jr.
Hand PUNCH

Powerful, easy-to-use punch weighing only 2-3/4 lbs. Capacity — 1/4" hole through 16 ga. mild steel. Adjustable locating stop permits quick setting to any throat depth up to 2". Furnished with 7 punches and dies in metal case.



Nos. 20, 24, 25, 40
Ball Bearing PUNCHES

Screw press action with ball bearings in the race give tremendous power. Replacement ratchet handles available for Nos. 20, 24, and 25; bench bases for Nos. 20 and 40. For metal 3/8", 1/2" and 5/8" thick.



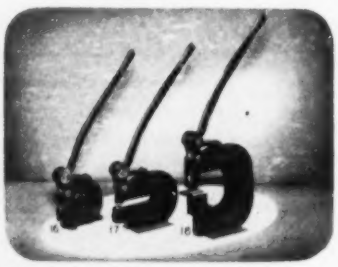
Nos. 10-11-12
Ball Bearing PUNCHES

Ball bearing screw principle enables each to develop over 14,000 lbs. punching pressure. Nos. 10 and 11 identical except for tubular handles for carrying punches and dies in No. 11. No. 12 has higher and deeper throat. Capacities—3/8" hole through 1/4" mild steel.



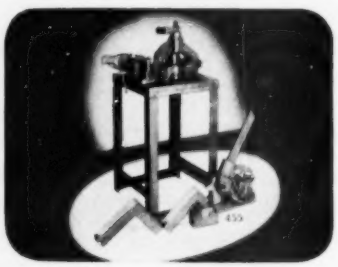
Nos. 7-7½-8
Roller Bearing PUNCHES

Powerful, lever-type punches with roller bearings. Will punch and strip positively inside 90°. Lever cannot disengage by moving too far in either direction. Quick change punches and dies. Swivel bases available. Capacity — mild steel up to 1/4" thick.



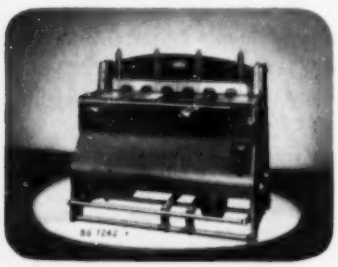
Nos. 16, 17, 18
Bench PUNCHES

Roller bearing, lever-type punches for bench use. No. 18 has higher and deeper throat than Nos. 16 and 17. Capacity — mild steel: No. 16 — 3/8" through 1/4"; No. 17 — 1/4" through 1/4"; No. 18 — 13/16" through 12 ga.



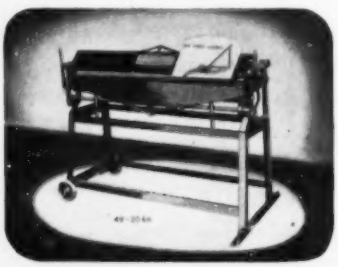
No. 455
Angle Iron COMBINATION

Strong and compact unit for shearing, notching, and bending angle iron. For on the job work or permanent mounting in the shop. Capacity — all sizes angle iron up to and including 2" x 2" x 1/4".



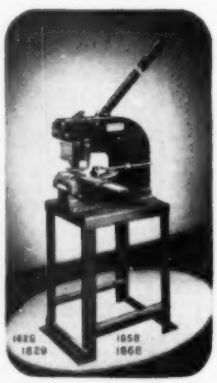
No. 72 Series
Power Squaring SHEARS

Fast machines for jobbing or production work. Flywheel and motor enclosed . . . simplified blade adjustment. In four sizes: widths of 36" and 42" have 16 ga. capacity; 42" machine shown has 14 ga. capacity; 60" has 12 ga. capacity.



49" 20 Ga.
Bending BRAKES

Form a 1/2" flange in 20 ga. mild steel their entire length. In two styles: for straight bending or for combination box and pan work. Roller bearing bending brakes in 18 ga. or 16, 14, 12 ga. capacities also availbale.



Foot, Lever, and
Power PUNCHES

Many models from which to choose. Lever punches have powerful geared action . . . power presses have flywheel in rear. Throat depths up to 24". Auxiliary attachments available . . . wide range of punches and dies. Catalog gives full details and specifications of each.



No. 127
Inclinable
PUNCH PRESS

Can be tilted to a maximum of 25°. Flywheel at rear for safety and easier feeding of stock. Rated at 275 strokes per minute; capacity 5 tons. Throat depth 6", throat height 7". Small, compact and powerful. Also 10, 20, 35 ton models available with throat depths up to 24".

Also: RIVET SQUEEZERS
BENCH SHEARS
HAND TOOLS
PUNCHES
DIES
for THE METAL-WORKING INDUSTRY

Send for Catalog

WHITNEY METAL TOOL COMPANY · 91 Forbes St., Rockford, Illinois

Section of

JANUARY 1953

AMERICAN ARTISAN

1953 DIRECTORY

OF WARM AIR HEATING, RESIDENTIAL AIR CONDITIONING AND SHEET METAL PRODUCTS

Part 1.—Products Classified . . . . . Page 2d

If you want to know the names of one or more manufacturers making a certain product, look in Part 1, where products are classified alphabetically in directory style with the noun governing (for instance, Warm Air Furnaces are listed as Furnaces, Warm Air).

Part 2.—Trade Names . . . . . Page 69d

If you have the trade name of a product and want to know who manufactures it, look in Part 2, where trade names are alphabetically listed. Trade names the same as or identifiable with the company name are not listed. Manufacturers with such trade names can be readily identified under their product classification in Part 1.

Part 3.—Manufacturers' Addresses . . . . Page 90d

For the complete name and address of any manufacturer, look in Part 3.

Part 4.—Index to Advertisers and Products Advertised in This Issue . . . . . Page 109d

For the page on which you will find the advertising of manufacturers in this issue, as well as information on the products they advertise, see Part 4 in this issue.

Section of

American Artisan

1953 Directory of Warm Air Heating, Residential AIR CONDITIONING AND SHEET METAL PRODUCTS

[Part 1 — PRODUCTS CLASSIFIED]

ADSORBERS, ODOR

Aerotrol Engineering Corp., Pittsburgh, Pa.
American Solvent Recovery Corp., Columbus, Ohio
Carbide & Carbon Chemicals Co., Div. Union Carbide & Carbon Corp., New York, N. Y.
Connor Engineering Corp., W. B., Danbury, Conn.
Research Products Corp., Madison, Wis.

AIR CONDITIONING UNITS

CENTRAL PLANT, SUMMER

(Consisting of blower, filter, cooling coil and condensing unit for duct distribution of air)

Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, Ohio
Alton Mfg. Co., Dallas, Texas
Brunner Mfg. Co., Utica, N. Y.
Buffalo Forge Co., Buffalo, N. Y.
Carrier Corp., Syracuse, N. Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Frigidaire Div., G. M. Corp., Dayton, Ohio
Front Rank Furnace Co., St. Louis, Mo.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Governair Corp., Oklahoma City, Okla.
Larkin Coils, Inc., Atlanta, Ga.
Lennox Furnace Co., Marshalltown, Iowa
Lipman Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
McQuay, Inc., Minneapolis, Minn.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Nevinger Mfg. Co., Inc., Greenville, Ill.
Niagara Blower Co., New York, N. Y.
Schnacke, Inc., Evansville, Ind.
Trane Co., The, La Crosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Westinghouse Elec. Corp., Sturtevant Div., Boston, Mass.
Yates-American Machine Co., Beloit, Wis.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis

(Consisting of blower, filter, cooling coil with connection to remote condensing unit or cold water supply, for duct distribution of air)

Air & Refrigeration Corp., New York, N. Y.
Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, Ohio
Baker Refrigeration Corp., South Windham, Maine.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Buffalo Forge Co., Buffalo, N. Y.
Bush Mfg. Co., West Hartford, Conn.
Carrier Corp., Syracuse, N. Y.
Clarage Fan Co., Kalamazoo, Mich.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Frigidaire Div. General Motors Corp., Dayton, Ohio.
Front Rank Furnace Co., St. Louis, Mo.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Governair Corp., Oklahoma City, Okla.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Jaden Mfg. Co., Hastings, Nebr.
Kennard Corp., St. Louis, Mo.
Lipman Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
McQuay, Inc., Minneapolis, Minn.
Marlo Coil Co., St. Louis, Mo.
Meyer Furnace Co., Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Nevinger Mfg. Co., Inc., Greenville, Ill.
Niagara Blower Co., New York, N. Y.
Premier Furnace Co., Dowagiac, Mich.
Refrigeration Appliances, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, Ohio.
Rempe Co., Chicago, Ill.
Skinner Heating & Ventilating Co., St. Louis, Mo.
Sterling Air Conditioning Corp., Washington, D. C.
Trane Co., LaCrosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Vilter Mfg. Co., Milwaukee, Wis.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

(Consisting of blower, cooling coil and condensing unit for connection to existing warm air system)

Air Conditioning Engineering Co., Cambridge, Mass.
Carrier Corp., Syracuse, N. Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Front Rank Furnace Co., St. Louis, Mo.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Lennox Furnace Co., Marshalltown, Iowa
Mueller Furnace Co., L. J., Milwaukee, Wis.
Trane Co., The, LaCrosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Westinghouse Elec. Corp., Sturtevant Div., Boston, Mass.
York Corp., York, Pa.

(Consisting of blower, cooling coil, filter and condensing unit for connection to existing warm air system)

Air Conditioning Engineering Co., Cambridge, Mass.
Brunner Mfg. Co., Utica, N. Y.
Carrier Corp., Syracuse, N. Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Delta Heating Corp., Trenton, N. J.
Front Rank Furnace Co., St. Louis, Mo.
General Electric Co., Air Cond. Div., Bloomfield, N. J.
Lennox Furnace Co., Marshalltown, Iowa
Mueller Furnace Co., L. J., Milwaukee, Wis.
Trane Co., The, LaCrosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Viking Air Conditioning Corp., Cleveland, Ohio
Westinghouse Elec. Corp., Sturtevant Div., Boston, Mass.
Yates-American Machine Co., Beloit, Wis.
York Corp., York, Pa.

(Consisting of cooling coil and condensing unit for connection to existing warm air system)

Air Conditioning Engineering Co., Cambridge, Mass.
Barkow Mfg. Co., Inc., Aug. G., Milwaukee, Wis.
Brunner Mfg. Co., Utica, N.Y.
Carrier Corp., Syracuse, N.Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Front Rank Furnace Co., St. Louis, Mo.
General Electric Co., Air Cond. Div., Bloomfield, N.J.
Lennox Furnace Co., Marshalltown, Iowa
Mueller Furnace Co., L. J., Milwaukee, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N.Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Westinghouse Elec. Corp., Sturtevant Div., Boston, Mass.
Worthington Corp., Harrison, N.J.
York Corp., York, Pa.

(Consisting of cooling coil, filter and condensing unit for connection to existing warm air system)

Air Conditioning Engineering Co., Cambridge, Mass.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Bryant Heating Div., Affil. Gas Equipment, Inc., Cleveland, Ohio
Carrier Corp., Syracuse, N.Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Front Rank Furnace Co., St. Louis, Mo
General Electric Co., Air Conditioning Div., Bloomfield, N.J.
Mueller Furnace Co., L. J., Milwaukee, Wis
Schnacke, Inc., Evansville, Ind.
Typhoon Air Conditioning Co., Inc., Brooklyn, N.Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Westinghouse Elec. Corp., Sturtevant Div., Boston, Mass.
Worthington Corp., Harrison, N.J.
Yates-American Machine Co., Beloit, Wis.
York Corp., York, Pa.

CENTRAL PLANT, SUMMER-WINTER

(Consisting of blower, filter, humidifier, direct fired warm air furnace, cooling coil and condensing unit for duct distribution of air)

Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, Ohio
Carrier Corp., Syracuse, N.Y.
Delta Heating Corp., Trenton, N.J.
Front Rank Furnace Co., St. Louis, Mo.
General Electric Co., Air Conditioning Div., Bloomfield, N.J.
Lennox Furnace Co., Marshalltown, Iowa
Mueller Furnace Co., L. J., Milwaukee, Wis.
Niagara Blower Co., New York, N.Y.
Skinner Heating & Vent. Co., St. Louis, Mo.
Typhoon Air Conditioning Co., Inc., Brooklyn, N.Y.
Waterman-Waterbury Co., Minneapolis, Minn.
York Corp., York, Pa.

(Consisting of blower, filter, humidifier, direct fired warm air furnace and cooling coil for connection to remote condensing unit or cold water supply for duct distribution of air)

Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, Ohio
Bryant Heating Div., Affil. Gas Equipment, Inc., Cleveland, O.
Carrier Corp., Syracuse, N. Y.
Front Rank Furnace Co., St. Louis, Mo.
Meyer Furnace Co., Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Servel, Inc., Electric Refrigeration Div., Evansville, Ind.
Syncromatic Corp., Watertown, Wis.
Viking Mfg. Corp., Cleveland, Ohio.
York Corp., York, Pa.

(Consisting of blower, filter, humidifier, steam generator, heating coil and cooling coil for duct distribution of air)

Air Conditioning Engineering Co., Cambridge, Mass.
American Coils, Inc., Newark, N.J.
Front Rank Furnace Co., St. Louis, Mo.
Servel, Inc., Electric Refrigeration Div., Evansville, Ind.
Typhoon Air Conditioning Co., Inc., Brooklyn, N.Y.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

(Consisting of blower, filter, humidifier, reverse refrigeration cycle (heat pump), heating coil and cooling coil for duct distribution of air)

Air-Eau-Heat, Inc., Portland, Ore.
Acme Industries, Inc., Jackson, Mich.
American Coils, Inc., Newark, N. J.
Front Rank Furnace Co., St. Louis, Mo.
General Electric Co., Air Cond. Div., Bloomfield, N. J.
Northwest Heating, Inc., Portland, Ore
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
Westinghouse Elec. Corp., Sturtevant Div., Boston, Mass.
York Corp., York, Pa.

CENTRAL PLANT, WINTER

(Consisting of blower, filter, humidifier, heating coil and connection to remote steam or hot water boiler for duct distribution of air (split system))

Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, Ohio
Brunner Mfg. Co., Utica, N. Y.
Buffalo Forge Co., Buffalo, N. Y.
Bush Mfg. Co., West Hartford, Conn
Carrier Corp., Syracuse, N. Y.
Clarage Fan Co., Kalamazoo, Mich.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Governair Corp., Oklahoma City, Okla.
Handelan Washed Air Co., Minneapolis, Minn.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Jaden Mfg. Co., Inc., F., Hastings, Nebr.
Johnson Co., S. T., Oakland, Calif., and Philadelphia, Pa.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kennard Corp., St. Louis, Mo.
Marlo Coil Co., St. Louis, Mo.
Metromatic Mfg. Co., Everett, Mass.
Nevinger Mfg. Co., Inc., Greenville, Ill.
New York Blower Co., Chicago, Ill.
Niagara Blower Co., New York, N. Y.
Refrigeration Appliances, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, Ohio.
Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
Trane Co., The, LaCrosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Worthington Pump & Machinery Corp., Harrison, N. J.
Young Radiator Co., Racine, Wis.

(Consisting of blower, filter, humidifier and direct fired warm air furnace)

(Also see furnaces, winter air conditioning)

Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, Ohio
American Ideal-Aire Corp., Mineola, N. Y.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Armstrong Furnace Co., Columbus, Ohio
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Cary Mfg. Co., Waupaca, Wis.
Certified Furnace Co., St. Paul, Minn.
Conco Engineering Works, Mendota, Ill.
Coroaire Heater Corp., Cleveland, Ohio
Electric Furnace-Man, Inc., Emmaus, Pa.
Front Rank Furnace Co., St. Louis, Mo.
General Electric Co., Air Cond. Div., Bloomfield, N. J.
International Heater Co., Utica, N. Y.
International Sales Co., San Francisco, Calif.
Kaustine Co., Inc., Perry, N. Y.
Lennox Furnace Co., Marshalltown, Iowa
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Olson & Co., Arthur A., Canfield, Ohio
Patten Co., J. V., Sycamore, Ill.
Perfection Stove Co., Cleveland, Ohio
Southwest Mfg. Co., Aurora, Mo.
Surface Combustion Corp., Toledo, Ohio
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
Williamson Heater Co., Cincinnati, Ohio

EVAPORATIVE TYPE, SUMMER

(Consisting of blower, filter, pump, and sprays or mats for cooling by evaporation)

Air Cooling Engineering Co., Evanston, Ill.
Airfan Engineering Co., Los Angeles, Calif.
Air & Refrigeration Corp., New York, N. Y.
Alton Mfg. Co., Dallas, Texas.
American Cooling Tower Co., Kansas City, Mo.
Aqua-Mist Co., Topeka, Kans.
Arizona Maintenance Co., Tucson, Ariz.
Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
Barwick Mfg. Corp., Wichita, Kans.
Belmetals Mfg. Co., Belmont, Calif.
Beyer Oil Burner Co., Rosamond, Calif.
Campbell, E. K., Kansas City, Mo.
Central States Mfg. Co., Inc., Arkansas City, Kans.
Climax Machinery Co., Indianapolis, Ind.
Comfort Products Corp., Dallas, Texas.
Davison, Inc., Frank D., Los Angeles, Calif.
De Hu Matic Air Conditioner Co., Dallas, Texas. (Vaporization control)
Dearborn Stove Co., Dallas, Texas.
Drayer-Hanson, Inc., Los Angeles, Calif.
Essick Mfg. Co., Los Angeles, Calif.
Farr Co., Los Angeles, Calif.
Great National Air Conditioning Corp., Oklahoma City, Okla.
International Metal Products Co., Phoenix, Ariz.
Leisurehouse, Inc., Wichita, Kans.
Little Giant Vaporizer Co., Oklahoma City, Okla.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
McQuay, Inc., Minneapolis, Minn.
Montag Stove & Furnace Works, Portland, Ore.
Morey, Dan, Los Angeles, Calif.
Mountain States Equipment Co., Denver, Colo
National Engineering & Mfg. Co., Kansas City, Mo .
Palmer Mfg. Corp., Phoenix, Ariz.

Pernot Corp., Norwalk, Calif.
Polaire Cooler Co., Inc., El Mirage, Ariz.
Reynolds Mfg. Co., Springfield, Mo.
Rheem Mfg. Co., New York, N. Y.
Southern Air Conditioning Mfg. Co., Fort Worth, Texas.
Sterling Air Conditioning Corp., Washington, D. C.
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.
Thompson Mfg. Co., A. F., Huntington, W. Va.
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Utility Appliance Corp., Los Angeles, Calif.
Western Blower Co., Seattle, Wash.
York Corp., York, Pa.

ROOM TYPE, FLOOR CABINET, UNDER 3 H.P. SUMMER

(Consisting of blower, filter, and cooling coil for connection to remote condensing unit or cold water supply)

Airtemp Div. Chrysler Corp., Dayton, Ohio.
American Coils, Inc., Newark, N. J.
Brown Products Co., Forest Hills, N. Y.
Buffalo Forge Co., Buffalo, N. Y.
Carrier Corp., Syracuse, N. Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Jaden Mfg. Co., Hastings, Nebr.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kennard Corp., St. Louis, Mo.
King Co., Owatonna, Minn.
McQuay, Inc., Minneapolis, Minn.
Marlo Coil Co., St. Louis, Mo.
Refrigeration Appliances, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, Ohio.
Scott-Newcomb, Inc., St. Louis, Mo.
Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
Sterling Air Conditioning Corp., Washington, D. C.
Sutton Corp., O. A., Wichita, Kans.
Trane Co., The, La Crosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Worthington Corp., Harrison, N.J.
York Corp., York, Pa.

(Consisting of blower, filter, cooling coil, and condensing unit)

Airtemp Div. Chrysler Corp., Dayton, Ohio.
Baltimore Porcelain Steel Corp., Baltimore, Md.
Buffalo Forge Co., Buffalo, N. Y.
Carrier Corp., Syracuse, N. Y.
Coolerator Co., Duluth, Minn.
Hotpoint, Inc., Chicago, Ill.
Ilg Electric Ventilating Co., Chicago, Ill.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Pleasantaire Corp., Washington, D. C.
Quiet-Heat Mfg. Corp., Newark, N. J.
Radio Corp. of America, Camden, N.J.
Refrigeration Appliances, Inc., Chicago, Ill.
Remington Air Conditioning Div., Remington Corp., Auburn, N.Y.
Scott-Newcomb, Inc., St. Louis, Mo.
Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
Sterling Air Conditioning Corp., Washington, D. C.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

ROOM TYPE, FLOOR CABINET, UNDER 3 H.P. WINTER-SUMMER

(Consisting of blower, filter, humidifier, and heating and cooling coils for connection to steam or hot water supply and remote condensing unit or cold water supply)

Air Conditioning Engineering Co., Cambridge, Mass.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Buffalo Forge Co., Buffalo, N. Y.
Carrier Corp., Syracuse, N. Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Jaden Mfg. Co., Hastings, Nebr.
Kennard Corp., St. Louis, Mo.
McQuay, Inc., Minneapolis, Minn.
Marlo Coil Co., St. Louis, Mo.
Refrigeration Appliances, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, Ohio.
Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
Sterling Air Conditioning Corp., Washington, D. C.
Trane Co., The, LaCrosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
United States Air Conditioning Corp., Minneapolis, Minn.
Worthington Corp., Harrison, N. J.
York Corp., York, Pa.

ROOM TYPE, FLOOR CABINET, WINTER

(Consisting of blower, filter, humidifier, and heating coil for connection to remote boiler)

Buffalo Forge Co., Buffalo, N. Y.
Carrier Corp., Syracuse, N. Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kennard Corp., St. Louis, Mo.
McQuay, Inc., Minneapolis, Minn.
Refrigeration Economics Co., Inc., Canton, Ohio.
Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
Sterling Air Conditioning Corp., Washington, D. C.
Surface Combustion Corp., Toledo, Ohio.
Trane Co., The, LaCrosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Worthington Corp., Harrison, N. J.

ROOM TYPE, WINDOW, SUMMER

(Consisting of blower, filter, cooling coil and condensing unit)

Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, Ohio
Baker Refrigeration Corp., South Windham, Maine
Bryant Heating Div., Affil. Gas Equipment, Inc., Cleveland, Ohio
Carrier Corp., Syracuse, N. Y.
Coolerator Co., Duluth, Minn.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Deering Air Conditioning Co., Cincinnati, Ohio
Fedders-Quigan Corp., Buffalo, N. Y.
Frigidaire Div., General Motors Corp., Dayton, Ohio
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kelvinator Div., Nash-Kelvinator Corp., Detroit, Mich.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Quiet-Heet Mfg. Corp., Newark, N. J.
Remington Air Cond. Div., Remington Corp., Auburn, N. Y.
Sutton Corp., O. A., Wichita, Kans.
Typhoon Air Conditioning Co., Inc., Brooklyn 15, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Viking Air Conditioning Corp., Cleveland, Ohio
Worthington Corp., Harrison, N. J.
Yates-American Machine Co., Beloit, Wis.
York Corp., York, Pa.

STORE TYPE, FLOOR CABINET OR SUSPENDED, SUMMER, 3 HP AND OVER

(Consisting of blower, filter, cooling coil and condensing unit, with air discharge approximately 6 ft above floor)

Airtemp Div., Chrysler Corp., Dayton, Ohio.
Baker Refrigeration Corp., South Windham, Maine.
Bard Mfg. Co., Bryan, Ohio.
Brunner Mfg. Co., Utica, N. Y.
Carrier Corp., Syracuse, N. Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Frick Co., Waynesboro, Pa.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Governair Corp., Oklahoma City, Okla.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Lipman Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Nat Corp., Kansas City, Mo.
Nevinger Manufacturing Co., Inc., Greenville, Ill.
Refrigeration Appliances, Inc., Chicago, Ill.
Rinehart, Inc., Richmond, Ind.
Scott-Newcomb, Inc., St. Louis, Mo.
Skinner Heating & Ventilating Co., St. Louis, Mo.
Trane Co., The, LaCrosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
United Conditioning Corp., Croton Falls, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Viking Mfg. Corp., Cleveland, Ohio.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Worthington Corp., Harrison, N. J.
Yates-American Machine Co., Beloit, Wis.
York Corp., York, Pa.

AIR DIFFUSERS

See Diffusers, Air

AIR FILTERS

See Filters, Air

AIR FRESHENING APPARATUS

Boyle-Midway, Inc., New York, N. Y.
Electroaire Corp., Long Island City, N. Y.

AIR METERS

See Meters, Air Velocity, Direct Reading; Anemometers

AIR, PURIFICATION

See Adsorbers, Odor

AIR STERILIZERS

Air Purification Service, Inc., New York, N. Y.
Germatrol Corp., Pittsburgh, Pa.
Hanovia Chemical & Mfg. Co., Newark, N. J.
Health Trola Div., Excel Heating & Air Conditioning Co., Chicago, Ill.
Iron City Chemical Co., Valencia, Pa.
Lientz Co., B. P., Kansas City, Mo.
National Air Conditioning, Inc., Johnstown, Pa.
Nelson Products, Herman, American Air Filter Co., Inc., Louisville, Ky.
Pittsburgh Chemical Laboratories, Inc., Pittsburgh, Pa.

AIR WASHERS

See Washers, Air

ALUMINUM COATED SHEETS

See Sheets, Metal, Aluminum Coated

ALUMINUM PIPE

See Tubing, Aluminum

ALUMINUM SHEETS

See Sheets, Metal, Aluminum

ANALYZERS, CO_2, PORTABLE

Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Defender Instrument & Regulator Co., St. Louis, Mo.
Dwyer Mfg. Co., F. W., Chicago, Ill.
Ellison Draft Gage Co., Chicago, Ill.
Engelhard, Inc., Chas., East Newark, N. J.
General Scientific Equipment Co., Philadelphia, Pa.
Hays Corp., Michigan City, Ind.
Permutit Co., New York, N. Y.
Preferred Utilities Mfg. Corp., New York, N. Y.
Uehling Instrument Co., Paterson, N. J.

ANEMOMETERS

Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Detroit Air Conditioning Service Co., Detroit, Mich.
Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
Hastings Instrument Co., Inc., Hampton, Va.
Hill & Co., E. Vernon, Chicago, Ill.
Illinois Testing Laboratories, Inc., Chicago, Ill. (Thermo-electrical)
Taylor Instrument Companies, Rochester, N. Y.
Willson Products, Inc., Reading, Pa.

ANGLES, BARS, BEAMS, CHANNELS AND TEES (LIGHT WEIGHT SHAPES)

Acme Steel Co., Chicago, Ill.
Alden Mfg. Co., Painesville, Ohio.
Allegheny Ludlum Steel Corp., Pittsburgh, Pa. (Stainless steel)
Aluminum Co., of America, Pittsburgh, Pa.
American Brass Co., Waterbury, Conn.
Bethlehem Steel Co., Bethlehem, Pa.
Byers Co., A. M., Pittsburgh, Pa. (Wrought iron structural shapes)
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
Dahlstrom Metallic Door Co., Jamestown, N. Y. (Angles, Channels)
Dow Chemical Co., Midland, Mich.
Harvey Machine Co., Inc., Torrance, Calif.
Inland Steel Co., Chicago, Ill.
Inland Steel Products Co., Milwaukee, Wis.
International Steel Co., Evansville, Ind. (Angles, Bars, Beams, Channels, Tees)
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Kawneer Co., Niles, Mich.
Laclede Steel Co., St. Louis, Mo. (Bars)
Penn Metal Co., Inc., New York, N. Y. (Channels)
Republic Steel Corp., Cleveland, Ohio.
Revere Copper & Brass Inc., New York, N. Y.
Tennessee Coal & Iron Div., U.S. Steel Corp., Fairfield, Ala.
Truscon Steel Co., Youngstown, Ohio.
United States Steel Co., Pittsburgh, Pa.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

ARC WELDERS

See Welders, Arc

ARC WELDING ELECTRODES

See Rods, Welding

ASBESTOS BOARD

See Sheets, Non-Metallic

ASBESTOS PAPER

See Paper, Asbestos

ATTIC FANS

See Fans, Night Air Cooling

AUTOMATIC HUMIDIFIERS

See Humidifiers, Furnace

AWNINGS, SHEET METAL

Kawneer Co., Niles, Mich.
Kool-Vent Metal Awning Corp. of America, Pittsburgh, Pa.
Russell Co., F. C., Cleveland, Ohio.
Wagner Awning & Mfg., Co., Cleveland, Ohio.

BAFFLES, COMBUSION CHAMBER, OIL BURNER AND STOKER

Amerform Corp., Philadelphia, Pa.
Barclay Co., Robt., Chicago, Ill
Boston Machine Works Co., Lynn, Mass.
Chicago Fire Brick Co., Chicago, Ill.
Frankland Corp., Ferndale, Mich.
Harvey, Inc., Sid, Valley Stream, N. Y.
Insulation & Refractories Co., Williamson, N. Y.
Iron-Hide Sales Co., Matawan, N.J.
Laclede-Christy Co., St. Louis, Mo.
Oil Equipment Mfg. Co., New Haven, Conn.
Peterson Co., B. A., Dowagiac, Mich.
Quigley Co., Inc., New York, N. Y.
Refractory & Insulation Corp., New York, N. Y.
Robinson Insulation Co., Great Falls, Mont.
S. O. S. Products Co., Inc., Brooklyn, N. Y.
Stark & Co., H. W., Ann Arbor, Mich.
Walsh Refractories Corp., St. Louis, Mo.
Zeh Co., Inc., Passaic, N.J.

BAGS, DUST RECOVERY

Burcott Mills, Chicago, Ill.
Day Co., Minneapolis, Minn.
Raybestos-Manhattan, Inc., Manheim, Pa.
Wagner Awning & Mfg. Co., Cleveland, Ohio.

BALANCING EQUIPMENT, FAN

Bear Mfg. Co., Rock Island, Ill.
Gisholt Machine Co., Madison, Wis.
Sundstrand Machine Tool Co., Rockford, Ill.

BAND SAWS

See Machines, Saws, Band

BAR FOLDERS

See Machines, Bar Folding

BAROMETRIC DRAFT DAMPERS

See Dampers, Draft, Barometric; Draft Diverters

BARS

See Angles, Bars, Beams, Channels, and Tees (Light weight shapes)

BASEBOARD DIFFUSERS

Berger Furnace Mfg. Co., Pittsburgh, Pa.
Gerwin Industries, Michigan City, Ind.
Lima Register Co., Lima, Ohio
Patco Mfg. Co., Philadelphia, Pa.
Titus Mfg. Corp., Waterloo, Iowa
Vectaire Mfg. Co., Melrose, Mass.

BASES AND PADS, VIBRATION ISOLATING

Buffalo Forge Co., Buffalo, N. Y.
Clarage Fan Co., Kalamazoo, Mich.
Cork Insulation Co., Inc., New York, N. Y.
Division Lead Co., Chicago, Ill.
Felters Co., Inc., Boston, Mass.
Firestone Tire & Rubber Co., Akron, Ohio.
Goodrich Co., B. F., Akron, Ohio.
Hobsite Products Co., Inc., Harrison, N. J.
Johns-Manville, New York, N. Y.
Korfund Co., Inc., Long Island City, N. Y.
Lord Mfg. Co., Erie, Pa.
MB Mfg. Co., Inc., New Haven, Conn.
Mundet Cork Corp., Brooklyn, N. Y.
National Cork Co., Englewood, N. J.
National Lead Co., New York, N. Y.

Raybestos-Manhattan, Inc., Passaic, N. J.
Robinson Aviation, Inc., Teterboro, N.J.
Sponge Rubber Products Co., Shelton, Conn.
United Cork Cos., Kearny, N. J.
United States Rubber Co., New York, N. Y.
Vibration Eliminator Co., Long Island City, N. Y.
Wagner Awning & Mfg. Co., Cleveland, Ohio.
Western Felt Works, Chicago, Ill. (Felt).

BATHS, TINNING

Eclipse Fuel Engineering Co., Rockford, Ill.
Farrelloy Co., Philadelphia, Pa.

BEADERS

See Machines, Beading

BEAMS

See Angles, Bars, Beams, Channels, and Tees (Light weight shapes)

BEARINGS, PILLOW BLOCK

Ahlberg Bearing Co., Chicago, Ill.
Air Controls, Inc., Cleveland, Ohio.
Anti-Friction Bearings Co., Los Angeles, Calif.
Chain Belt Co., Milwaukee, Wis.
Chicago Die Casting Co., Chicago, Ill.
Dick Co., Inc., R. & J., Passaic, N. J.
Dodge Mfg. Corp., Mishawaka, Ind.
Fafnir Bearing Co., The, New Britain, Conn.
Freed Products Co., Moline, Ill.
Golden's Foundry & Machine Co., Columbus, Ga.
Jones Foundry & Machine Co., W. A., Chicago, Ill.
Lau Blower Co., Dayton, Ohio.
Link-Belt Co., Chicago, Ill.
Norma-Hoffmann Bearing Corp., Stamford, Conn.
Plymouth Industries, Inc., Plymouth, Ind.
Randall Graphite Bearings, Inc., Chicago, Ill.
Royersford Foundry & Machine Co., Royersford, Pa.
Seco-Lite Mfg. Co., St. Louis, Mo.
Shafer Bearing Corp., Downers Grove, Ill.
SKF Industries, Inc., Philadelphia, Pa.
Sprouse Co., Inc., V. E., Columbus, Ind.
Stephens-Adamson Mfg. Co., Aurora, Ill.
Triangle Mfg. Co., Oshkosh, Wis.
Whiteley Bearing Corp., Chicago, Ill.
Wood's Sons Co., T. B., Chambersburg, Pa.

BELTS, V

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
American Pulley Co., Philadelphia, Pa.
Browning Mfg. Co., Inc., Maysville, Ky.
Chicago Belting Co., Chicago, Ill.
Congress Drives Div. Tann Corp., Detroit, Mich.
Dayton Rubber Co., Dayton, Ohio.
Dick Co., Inc., R. & J., Passaic, N. J.
Dodge Mfg. Corp., Mishawaka, Ind.
Firestone Tire & Rubber Co., Akron, Ohio.
Gates Rubber Co., Denver, Colo.
Goodrich Co., B. F., Akron, Ohio.
Goodyear Tire & Rubber Co., Inc., Akron, Ohio.
Jones Foundry & Machine Co., W. A., Chicago, Ill.
Lovejoy Flexible Coupling Co., Chicago, Ill.
Manheim Mfg. & Belting Co., Manheim, Pa. (Adjustable).
Maurey Mfg. Corp., Chicago, Ill.
New York Belting & Packing Co., Passaic, N. J.
Pyott Foundry & Machine Co., Chicago, Ill.
Raybestos-Manhattan, Inc., Passaic, N. J.
Republic Rubber Div., Lee Rubber & Tire Corp., Youngstown, Ohio.
Thermoid Co., Trenton, N. J.
United States Rubber Co., New York, N. Y.
Wood's Sons Co., T. B., Chambersburg, Pa.
Worthington Corp., Harrison, N. J.

BENDERS, (ANGLE, ETC.)

See Machines, Benders

BLADES, PROPELLER FAN

Ackermann Mfg. Co., Wheeling, W. Va.
Aerovent Fan Co., Piqua, Ohio.
Air Controls, Inc., Cleveland, Ohio.
Airmaster Corp., Chicago, Ill.
Beckett & Co., Thomas, Dallas, Texas.
Bern's Mfg. Co., Chicago, Ill.
Burden Co., Alan E., Los Angeles, Calif.
C & H Air Conditioning Fan Co., Inc., Atlanta, Ga.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Irvington, N. J.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Dallas Engineering Co., Inc., Dallas, Texas.
Dana Fan & Blower Corp., Cincinnati, Ohio
DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Dual-Air Fan Corp., South Elgin, Ill.
Dynamic Air Engineering, Inc., Los Angeles, Calif.
Electrovent Fan & Mfg. Co., Chicago, Ill.
International Engineering, Inc., Dayton, Ohio.
Kloppenborg Aluminum Foundry, Davenport, Iowa.
Lakewood Engineering & Mfg. Co., Chicago, Ill.
Martin Fan & Blower Co., Chicago, Ill.
Meier Electric & Machine Co., Indianapolis, Ind.
Myers Electric Co., Pittsburgh, Pa.
National Gas Equipment Co., Inc., Terrell, Texas.
Revcor, Chicago, Ill.
Peerless Electric Co., Warren, Ohio.
South Bend Air Products, Inc., South Bend, Ind.
Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Thermal Industries, Indio, Calif.
Torrington Mfg. Co., Torrington, Conn.

BLAST GATES

See Gates, Blast

BLOW PIPE EQUIPMENT

See Gates, Blast; Collectors, Blow Pipe; Fittings and Accessories, Blow Pipe

BLOWER CONTROLS

See Controls

BLOWER-FILTER UNITS, WARM AIR FURNACE

(Filter and fan only)

Advance Furnace Co., Wichita, Kans.
Agricola Furnace Co., Inc., Gadsden, Ala.
Air Comfort Co., South Gate, Calif.
Air Conditioning Equipment Co., Minneapolis, Minn.
Air Controls, Inc., Cleveland, Ohio.
Airwasher Corp., Eaton Rapids, Mich.
Aladdin Heating Corp., Oakland, Calif.
American Foundry & Furnace Co., Bloomington, Ill.
American Furnace Co., St. Louis, Mo.
American Machine Products Co., Marshalltown, Iowa.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Bard Mfg. Co., Bryan, Ohio.
Bovee Furnace Works, Waterloo, Iowa.
Brundage Co., Kalamazoo, Mich.
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Campbell Heating Co., Des Moines, Iowa.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Furblo Co., Hermansville, Mich.
Green Colonial Furnace Co., Des Moines, Iowa.
Hall-Neal Furnace Co., Indianapolis, Ind.
Harvey-Whipple, Inc., Springfield, Mass.
Hastings Air Conditioning Co., Hastings, Nebr.
Heating Assurance, Inc., Spokane, Wash.
Henry Furnace Co., Medina, Ohio.
Homer Furnace & Foundry Corp., Coldwater, Mich.
International Heater Co., Utica, N. Y.
International Oil Burner Co., St. Louis, Mo.
International Sales Co., San Francisco, Calif.
Jackson & Church Co., Saginaw, Mich.
Kortz Blower Mfg. Co., Grand Rapids, Mich.
Lau Blower Co., Dayton, Ohio.
Lennox Furnace Co., Marshalltown, Iowa.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Majestic Co., Inc., Huntington, Ind.
Marshall Furnace Co., Marshall, Mich.
Martin Fan & Blower Co., Chicago, Ill.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Northwest Foundry & Furnace Co., Portland, Ore.

Olsen Mfg. Co., C. A., Elyria, Ohio.
Palmer Mfg. Corp., Phoenix, Ariz.
Peerless Electric Co., Warren, Ohio.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Premier Furnace Co., Dowagiac, Mich.
Round Oak Co., Inc., of Ind., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Thermo-Products, Inc., North Judson, Ind.
Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
Utility Appliance Corp., Los Angeles, Calif.
Viking Air Conditioning Corp., Cleveland, Ohio.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Western Blower Co., Seattle, Wash.
Williamson Heater Co., Cincinnati, Ohio.
Zick Sheet Metal Works, Dearborn, Mich.

(Equipped with humidifier and/or germicidal apparatus)

National Air Conditioning Inc., Johnstown, Pa.

BLOWER HOUSINGS

See Housings, Blower and Fan

BLOWER-WASHER UNITS, WARM AIR FURNACE

Air Stream Filter Corp., St. Louis, Mo.
Airwasher Corp., Eaton Rapids, Mich.
American Machine Products Co., Marshalltown, Iowa.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Furblo Co., Hermansville, Mich.
Mueller Furnace Co., L. J., Milwaukee, Wis.
New York Blower Co., Chicago, Ill.

BLOWER WHEELS

See Wheels, Blower

BLOWERS

Exhausters

Aladdin Heating Corp., Oakland, Calif.
American Machine Products Co., Marshalltown, Iowa.
Ammerman Co., C. L., Minneapolis, Minn.
Babbin, Inc., New York, N. Y.
Bayley Blower Co., Milwaukee, Wis.
Billmyre Blower Div., Lamson Corp., Syracuse, N. Y.
Brundage Co., Kalamazoo, Mich.
Buffalo Forge Co., N. Y.
Carolina Blower Co., Inc., Greensboro, N.C.
Century Fan & Ventilator Co., Stamford, Conn.
Chelsea Fan & Blower Co., Inc., Plainfield, N.J.
Chicago Blower Corp., Franklin Park, Ill.
Chicago Fan & Finn Coil Co., Chicago, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N.Y.
Clarage Fan Co., Kalamazoo, Mich.
Day Co., Minneapolis, Minn.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Filkins, Inc., Edward, Chicago, Ill.
Gallaher Co., Omaha, Nebr.
Garden City Fan Co., Chicago, Ill.
General Blower Co., Morton Grove, Ill.
Ilg Electric Ventilating Co., Chicago, Ill.
Martin Fan & Blower Co., Chicago, Ill.
Nelson Products, Herman, American Air Filter Co., Inc., Louisville, Ky.
Northern Blower Co., Cleveland, Ohio.
Skinner Htg. & Vent. Co., St. Louis, Mo.
U. S. Air Conditioning Corp., Minneapolis, Minn.

Forced Draft, Ash Pit

Aladdin Heating Corp., Oakland, Calif.
American Blower Corp., Detroit, Mich.
Babbin, Inc., New York, N. Y.
Bayley Blower Co., Milwaukee, Wis
Breese Burners, Inc., Santa Fe, N. Mex.
Buffalo Forge Co., Buffalo, N. Y.
Champion Blower & Forge Co., Lancaster, Pa.
Champion Products Co., Muskegon, Mich
Clarage Fan Co., Kalamazoo, Mich.
Coppus Engineering Corp., Worcester, Mass.
Fasco Industries, Inc., Rochester, N. Y.
Garden City Fan Co., Chicago, Ill.
General Blower Co., Morton Grove, Ill.
General Blower Co., Inc., Philadelphia, Pa.
International Engineering, Inc., Dayton, Ohio.
Joy Mfg. Co., Pittsburgh, Pa.
Kortz Blower Mfg. Co., Grand Rapids, Mich.
Lehigh Fan & Blower Co., Allentown, Pa.
Martin Fan & Blower Co., Chicago, Ill.
New York Blower Co., Chicago, Ill.
Small Motors, Inc., Chicago, Ill.
South Bend Air Products, Inc., South Bend, Ind.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass
Wing Mfg. Co., L. J., Linden, N.J.

Furnace, Centrifugal

Agricola Furnace Co., Inc., Gadsden, Ala.
Air Conditioning Equipment Co., Minneapolis, Minn
Air Controls, Inc., Cleveland, Ohio.
Airecon Industries, Detroit, Mich.
Airfan Engineering Co., Los Angeles, Calif.
Airwasher Corp., Eaton Rapids, Mich.
Aladdin Heating Corp., Oakland, Calif.
American Blower Corp., Detroit, Mich.
American Foundry & Furnace Co., Bloomington, Ill.
American Furnace Co., St. Louis, Mo.
American Machine Products Co., Marshalltown, Iowa.
Auburn Burner Co., Auburn, Ind.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Brundage Co., Kalamazoo, Mich.
Buffalo Forge Co., Buffalo, N. Y.
Campbell Heating Co., Des Moines, Iowa.
Century Fan & Ventilator Co., Stamford, Conn.
Champion Blower & Forge Co., Lancaster, Pa.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Clarage Fan Co., Kalamazoo, Mich.
Eclipse Fuel Engineering Co., Rockford, Ill.
Freed Products Co., Moline, Ill.
Furblo Co., Hermansville, Mich.
General Blower Co., Morton Grove, Ill.
General Blower Co., Inc., Philadelphia, Pa.
Hastings Air Conditioning Co., Inc., Hastings, Nebr
International Sales Co., San Francisco, Calif.
Kortz Blower Mfg. Co., Grand Rapids, Mich.
Lau Blower Co., Dayton, Ohio.
Lennox Furnace Co., Marshalltown, Iowa.
MaGirl Foundry & Furnace Co., Bloomington, Ill
Majestic Co., Inc., Huntington, Ind.
Martin Fan & Blower Co., Chicago, Ill.
Mauer Engineering, Evanston, Ill.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Morrison Products, Inc., Cleveland, Ohio.
Mountain States Equipment Co., Denver, Colo.
Mueller Furnace Co., L. J., Milwaukee, Wis.
New York Blower Co., Chicago, Ill.
Palmer Mfg. Corp., Phoenix, Ariz.
Peerless Electric Co., Warren, Ohio.
Premier Furnace Co., Dowagiac, Mich.
Schwitzer-Cummins Co., Indianapolis, Ind.
Skinner Heating & Ventilating Co., Inc., St. Louis, Mo
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Standard Heating Equipment Co., Waterloo, Iowa.
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Utility Appliance Corp., Los Angeles, Calif.
Viking Air Conditioning Corp., Cleveland, Ohio.
Waterman-Waterbury Co., Minneapolis, Minn.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass
Zick Sheet Metal Works, Dearborn, Mich.

Induced Draft, Smoke Pipe

Aladdin Heating Corp., Oakland, Calif. (Industrial)
American Blower Corp., Detroit, Mich.
American Foundry & Furnace Co., Bloomington, Ill.
Ammerman Co., C. L., Minneapolis, Minn.
Autogas Co., Chicago, Ill.
Babbin, Inc., New York, N. Y.
Bayley Blower Co., Milwaukee, Wis.
Century Fan & Ventilator Co., Stamford, Conn.
Chicago Blower Corp., Franklin Park, Ill.
DeBothezat Fans Div. American Machine & Metals, Inc., Moline, Ill.
Gallaher Co., Omaha, Nebr.
Garden City Fan Co., Chicago, Ill.
General Blower Co., Morton Grove, Ill.
Kortz Blower Mfg. Co., Grand Rapids, Mich.
Lehigh Fan & Blower Co., Allentown, Pa.
Little Burner Co., Inc., H. C., San Rafael, Calif
Martin Fan & Blower Co., Chicago, Ill
New York Blower Co., Chicago, Ill
Perfection Stove Co., Cleveland, Ohio.

Small Motors, Inc., Chicago, Ill.
Queen Stove Works, Inc., Albert Lea, Minn.
Tjernlund Mfg. Co., St. Paul, Minn.
Viking Mfg. Corp., Cleveland, Ohio.
Whitty Co., Inc., Boston, Mass.
Wing Mfg. Co., L. J., Linden, N.J.

Ventilating System (Capacity 4,000 cfm up)

Air Controls, Inc., Cleveland, Ohio.
Airfan Engineering Co., Los Angeles, Calif.
Aladdin Heating Corp., Oakland, Calif.
American Foundry & Furnace Co., Bloomington, Ill.
American Machine Products Co., Marshalltown, Iowa.
Ammerman Co., C. L., Minneapolis, Minn.
Arex Co., Chicago, Ill.
Babbin, Inc., New York, N. Y.
Bayley Blower Co., Milwaukee, Wis.
Berns Mfg. Co., Chicago, Ill.
Billmyre Blower Div., Lamson Corp., Syracuse, N. Y.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Buffalo Forge Co., Buffalo, N. Y.
Campbell Heating Co., Des Moines, Iowa.
Campbell Co., E. K., Kansas City, Mo.
Century Fan & Ventilator Co., Stamford, Conn.
Champion Blower & Forge Co., Lancaster, Pa.
Chicago Blower Corp., Franklin Park, Ill.
Chicago Fan & Fin Coil Co., Chicago, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Clarage Fan Co., Kalamazoo, Mich.
Commercialaire, Inc., Brooklyn, N. Y.
Coppus Engineering Corp., Worcester, Mass.
Day Co., Minneapolis, Minn.
DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Furblo Co., Hermansville, Mich.
Garden City Fan Co., Chicago, Ill.
General Blower Co., Morton Grove, Ill.
General Blower Co., Inc., Philadelphia, Pa.
Hartzell Propeller Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Ilg Electric Ventilating Co., Chicago, Ill.
International Engineering, Inc., Dayton, Ohio.
Joy Mfg. Co., Pittsburgh, Pa.
Kortz Blower Mfg. Co., Grand Rapids, Mich.
Lau Blower Co., Dayton, Ohio.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Marlo Coil Co., St. Louis, Mo.
Martin Fan & Blower Co., Chicago, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mountain States Equipment Co., Denver, Colo.
National Engineering & Mfg. Co., Kansas City, Mo.
Nelson Products, Herman, American Air Filter Co., Inc., Louisville, Ky.
Newcomb-Detroit Co., Detroit, Mich.
New York Blower Co., Chicago, Ill.
Niagara Blower Co., New York, N. Y.
Peerless Electric Co., Warren, Ohio.
Phelps Mfg. Co., Little Rock, Ark.
Schwitzer-Cummins Co., Indianapolis, Ind.
Skinner Heating & Vent Co., Heater Div. of St. Louis Blow Pipe & Heater Co., St. Louis, Mo.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Trane Co., LaCrosse, Wis.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Utility Appliance Corp., Los Angeles, Calif.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Wing Mfg. Co., L. J., Linden, N.J.

BLOWING MACHINES, INSULATION

Babbin, Inc., New York, N. Y.
Insulating Equipment Co., Chicago, Ill.
Molloy Machine Corp., Chicago, Ill.
Rotary Compressor Blower Co., Grove City, Pa.
Superior Mfg. Co., Alexandria, Ind.

BOLTS, EXPANSION

Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago Expansion Bolt Co., Chicago, Ill.
Diamond Expansion Bolt Co., Inc., Garwood, N. J.
Fee & Mason Mfg. Co., Inc., Manasquan, N. J.
Industrial Screw Co., Chicago, Ill.
National Lead Co., New York, N. Y.
Ohio Bolt & Nut Co., Berea, Ohio
Paine Co., Addison, Ill.
Phillips Drill Co., Chicago, Ill.
Rawlplug Co., Inc., New York, N. Y.
Star Expansion Bolt Co., New York, N. Y.
U. S. Expansion Bolt Co., Inc., York, Pa.

BOLTS, TOGGLE AND ANCHOR

Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago Expansion Bolt Co., Chicago, Ill.
Diamond Expansion Bolt Co., Inc., Garwood, N. J.
Fee & Mason Mfg. Co., Inc., Manasquan, N. J.
Huck Mfg. Co., Detroit, Mich.
Industrial Screw Co., Chicago, Ill.
Paine Co., Addison, Ill.
Rawlplug Co., Inc., New York, N. Y.
Star Expansion Bolt Co., New York, N. Y.
U. S. Expansion Bolt Co., Inc., York, Pa.

BOMBS, SMOKE

Hill & Co., E. Vernon, Chicago, Ill. (Also guns)
Kilgore Mfg. Co., Westerville, Ohio.
Pains Fireworks Display Co., Inc., New York, N. Y.
Unexcelled Chemical Corp., New York, N. Y.

BOOSTER FANS

See Fans, Booster

BRAKES

See Machines, Brakes

BRUSHES, ACID

Allen Co., Inc., L. B., Chicago, Ill.
Brushes & Brooms Co., New York, N. Y.
Division Lead Co., Chicago, Ill.
Farrelloy Co., Philadelphia, Pa.
Lukens Metal Co., Thos. F., Philadelphia, Pa.
Milwaukee Brush Mfg. Co., Milwaukee, Wis.
Osborn Mfg. Co., Cleveland, Ohio.
Potomac Mfg. Co., Philadelphia, Pa.
Schaefer Brush Mfg. Co., Milwaukee, Wis. (Rustproof).
Weiss & Co., H., New York, N. Y.

BRUSHES, FURNACE

Brushes & Brooms Co., New York, N. Y.
Milwaukee Brush Mfg. Co., Milwaukee, Wis.
Osborn Mfg. Co., Cleveland, Ohio.
Schaefer Brush Mfg. Co., Milwaukee, Wis.
Worcester Brush & Scraper Co., Div. Mason Worcester Co., Worcester, Mass.

BUFFERS, GRINDERS, POLISHERS, AND SANDERS

Electric

Albertson & Co., Inc., Sioux City, Iowa.
Baldor Electric Co., St. Louis, Mo.
Black & Decker Mfg. Co., Towson, Md.
Brown-Brockmeyer Co., Inc., Dayton, Ohio.
Chicago Pneumatic Tool Co., New York, N. Y.
Delta Mfg. Div., Rockwell Mfg. Co., Milwaukee, Wis.
DeSoto Oil Burner Corp., York, Pa.
DoAll Co., Des Plaines, Ill.
Excelsior Tool & Machine Co., East St. Louis, Ill.
H & H Research Co., Detroit, Mich.
Hammond Machinery Builders, Inc., Kalamazoo, Mich
Haskins Co., R. G., Chicago, Ill. (Flexible shaft)
Hobart Bros. Co., Troy, Ohio.
Independent Pneumatic Tool Co., Aurora, Ill.
Jefferson Machine Tool Co., Cincinnati, Ohio.
Lee Co., K. O. Aberdeen, S. D.
L'Hommedieu & Sons Co., Chas. F., Chicago, Ill.
Mall Tool Co., Chicago, Ill.
Marathon Electric Mfg. Corp., Wausau, Wis.
Millers Falls Co., Greenfield, Mass.
Minnesota Mining & Mfg. Co., St. Paul, Minn.
Misener Mfg. Co., Inc., Syracuse, N. Y.
Portable Electric Tools, Inc., Chicago, Ill.
Reynolds Electric Co., River Grove, Ill.
Rotor Tool Co., Cleveland, Ohio. (Portable).
Skil Corporation, Chicago, Ill.
Small Motors, Inc., Chicago, Ill.
Snap-on Tools Corp., Kenosha, Wis.
Speedway Mfg. Co., Cicero, Ill.
Stanley Electric Tool Div., Stanley Works, New Britain, Conn.
Stow Mfg. Co., Binghamton, N. Y. (Flexible shaft)
Syntron Co., Homer City, Pa.
United States Electrical Tool Co., Cincinnati, Ohio.
U. S. Electrical Motors, Inc., Los Angeles, Calif. (Buffers)
Valley Electric Co., St. Louis, Mo.
Wyzenbeek & Staff, Inc., Chicago, Ill.
York Electric & Machine Co., York, Pa.

Pneumatic

Chicago Pneumatic Tool Co., New York, N. Y. (Grinders)
Ideal Commutator Dresser Co., Sycamore, Ill.
Independent Pneumatic Tool Co., Aurora, Ill.
Keller Tool Co., Grand Haven, Mich.
Rotor Tool Co., Cleveland, Ohio. (Portable)
Skil Corporation, Chicago, Ill.
Sunstrand Machine Tool Co., Rockford, Ill.

BURNERS, CONVERSION, RESIDENTIAL

Gas

Adams Mfg. Co., Cleveland, Ohio.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
Akeley-Steele Co., Aurora, Ill.
American Furnace Co., St. Louis, Mo.
American Gas Burner, Inc., Indianapolis, Ind.
American Heating & Engineering Co., New Albany, Ind.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Armstrong Furnace Co., Columbus, Ohio.
Aston Products, Inc., Hazel Park, Mich.
Auburn Burner Co., Auburn, Ind.
Autogas Co., Chicago, Ill.
Automatic Firing Corp., St. Louis, Mo.
Automatic Furnace Co., Lansing, Mich.
B. G. B. Mfg. Co., Dearborn, Mich.
Banner Burner Co., Youngstown, Ohio.
Barber Gas Burner Co., Cleveland, Ohio.
Bard Mfg. Co., Bryan, Ohio.
Barton Co., Minneapolis, Minn.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bowlby Air Devices Co., Wichita, Kans.
Brown Hart Engineering Corp., Hazel Park, Mich.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Budco, Inc., Detroit, Mich.
Burdett Mfg. Co., Chicago, Ill.
Calesco Corp., Lynn, Mass.
Central States Mfg. Co., Inc., Arkansas City, Kans.
Century Engineering Corp., Cedar Rapids, Iowa.
Ceramic Products Mfg. Co., Milwaukee, Wis.
Certified Furnace Co., St. Paul, Minn.
Columbia Burner Co., Toledo, Ohio.
Conco Engineering Works, Mendota, Ill.
Consolidated Industries, Inc., Lafayette, Ind.
Crane Co., Chicago, Ill.
Dalzen Tool & Mfg. Co., Detroit, Mich.
Dearborn Stove Co. Chicago, Ill.
Delco Appliance Div. General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N.J.
Denver Fire Clay Co., Denver, Colo.
Dornback Furnace & Foundry Co., Cleveland, Ohio.
Dunn-Rite Products, Garden City, Mich.
Economo Gas Products Co., Detroit, Mich.
Even-Air Mfg. & Sales Co., Detroit, Mich.
F & E Mfg. Co., Centerville, Calif.
Famous Furnace Co., Cleveland, Ohio.
Finn Engineers, Inc., Jerry, St. Paul, Minn.
Firewel Co., Inc., Buffalo, N. Y.
Floral City Heater Co., Monroe, Mich.
Fluid Heat Div., Anchor Post Products, Inc., Baltimore, Md.
Gasco Industries, Inc., Detroit, Mich.
Geisel Mfg. Inc., Elyria, Ohio.
General Automatic Products Corp., Baltimore, Md.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
Glasby Mfg. Co., Inc., J. P., Belleville, N. J.
Goodfriend Plb. & Htg. Burner Sales, Detroit, Mich.
H-P Products, Louisville, Ohio.
Handley-Brown Heater Co., Jackson, Mich.
Hansen Gas & Electric Co., San Francisco, Calif.
Harvey-Whipple, Inc., Springfield, Mass.
Heatcraft Co., Louisville, Ky.
Heil Co., Milwaukee, Wis.
Henry Furnace Co., Medina, Ohio.
Hook & Ackerman, Inc., New York, N. Y.
Hook & Miller, Pittsburgh, Pa.
Horsman-Markin Corp., Detroit, Mich.
Hutchinson Burner & Mfg. Co., Hutchinson, Kans.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N. Y.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Jackson Gas Burner Corp., Detroit, Mich.
Junior Co., J. C., Kansas City, Mo.
Ken-Joy Gas Burner Co., Milwaukee, Wis.
Killam Gas Burner Co., Denver, Colo. (Also commercial-industrial burners)
Kindl-Aire Corp., Cleveland, Ohio.
Kleenair Furnace Co., Portland, Ore.
Ko-Z-Aire Products, Inc., Red Oak, Iowa
LaHarco Industries, Minneapolis, Minn.
Lennox Furnace Co., Mashalltown, Iowa
Liberty Combustion Corp., Syracuse, N.Y.
Lientz Co., B. P., Kansas City, Mo.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
McDaniel Mfg. Co., Inc., Dallas, Texas.
Magic Servant Products Co., Detroit, Mich.
Majestic Co., Inc., Huntington, Ind.
Martin Co., Inc., J. O., San Francisco, Calif.
Maxwell Inc., Denver, Colo.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Mettler Co., Inc., The, Los Angeles, Calif.
Meyer Furnace Co., Peoria, Ill.
Mid-Continent Metal Products Co., Chicago, Ill.
Modern Controls Corp., Centerline, Mich.
Monad Products Co., Dearborn, Mich.
Moncrief Furnace & Mfg. Co., Dallas, Texas.
Moore Equipment Co., Lincoln, Nebr.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Multi-Therm Mfg. Co., Inc., Detroit, Mich.
Muncie Burner Mfg. Co., Romulus, Mich.
National Engineering & Mfg. Co., Kansas City, Mo.
National Stoker Co., St. Louis, Mo.
Niagara Motors Corp., Dunkirk, N. Y.
Norge Heat Div. Borg-Warner Corp., Kalamazoo, Mich.
Norman Products Co., Inc., Columbus, Ohio.
Northern Steel & Stoker Corp., Peoria, Ill.
Olsen Mfg. Co., The C. A., Elyria, Ohio
Olmstead & Co., Chas. M., Detroit, Mich.
Paramount Supply Co., Lincoln, Nebr.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Perfection Stove Co., Cleveland, Ohio.
Premier Burner Co., Cleveland, Ohio.
Pyro-Jet Div., Riverside Steel Co., Wheeling, W. Va.
Queen Stove Works, Inc., Albert Lea, Minn.
Quiet-Heet Mfg. Corp., Newark, N. J.
Radiation Furnace Corp., Benton Harbor, Mich.
Radiant Burners, Inc., Lombard, Ill.
Ransome Co., Emeryville, Calif.
Rapid Heat Corp., Detroit, Mich.
Ray Oil Burner Co., San Francisco, Calif. (Industrial)
Rayfield Co., C. L., Chicago, Ill.
Revere Products, Inc., Detroit, Mich.
Roberts-Gordon Appliance Corp., Buffalo, N. Y.
Round Oak Co., Inc. of Indiana, Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio.
S & S Heating Co., Detroit, Mich.
Schwab Safe Co., Lafayette, Ind.
Siemon Mfg. Co., Kansas City, Mo.
Smith Corp., A. O., Milwaukee, Wis.
Sonner Burner Co., Winfield, Kans.
Souther Iron Co., E. E., St. Louis, Mo.
Standard Fuel Engineering Co., Detroit, Mich.
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Sterling Burner Corp., Detroit, Mich.
Sterling Engineering Co., St. Louis, Mo.
Stewart Co., W. H., Oklahoma City, Okla.
Sullivan Valve & Engineering Co., Butte, Mont.
Sunny Sue Burner Co., Syracuse, N. Y.
Supreme Gas Burner Mfg. Co., Holly, Mich.
Sure Comfort Furnace Co., Forest Park, Ill.
Surface Combustion Corp., Toledo, Ohio.
Synchronous Flame, Inc., Chicago, Ill.
Taylor Appliance & Mfg. Co., Royal Oak, Mich.
Thatcher Furnace Co., Garwood, N. J.
Thermex Engineering Co., Chicago, Ill.
Thermomatic Corp., Willoughby, Ohio.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Toridheet Div. Cleveland Steel Products Corp., Cleveland, Ohio.
Triad Products Corp., Chicago, Ill.
Twin City Gas Specialty Co., Minneapolis, Minn.
U.S. Machine Corp., Lebanon, Ind.
United States Radiator Corp., Detroit, Mich.
Vacuum Gas Burner Corp., Olean, N. Y.
Van's Gas Burner Service, Detroit, Mich.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Webster Engineering Co., Tulsa, Okla.
Will-Burt Co., Orrville, Ohio.

Williams Oil-O-Matic Div., Eureka-Williams Corp., Bloomington, Ill.
Williamson Heater Co., Cincinnati, Ohio.
York-Shipley, Inc., York, Penn.
Zink Co., John, Tulsa, Okla.

Gas-Oil Combination

Automatic Firing Corp., St. Louis, Mo.
Eclipse Fuel Engineering Co., Rockford, Ill.
Hutchinson Burner & Mfg. Co., Hutchinson, Kans.
Johnson Co., S. T., Philadelphia, Pa. & Oakland, Calif.
Junior Co., J. C., Kansas City, Mo.
Lundt, Inc., Ernest C., Little Falls, N. J.
Mettler Co., Inc., The, Los Angeles, Calif.
Preferred Utilities Mfg. Corp., New York, N. Y.
Quiet Automatic Burner Corp., Newark, N. J.
Rayfield Co., C. L., Chicago, Ill.
Ray Oil Burner Co., San Francisco, Calif.
Roberts-Gordon Appliance Corp., Buffalo, N. Y.
Security Mfg. Co., Kansas City, Mo.
Siemon Mfg. Co., Kansas City, Mo.
Simplex Oil Heating Corp., Philadelphia, Pa.
Sonner Burner Co., Winfield, Kans.
Synchronous Flame, Inc., Chicago, Ill.
United Air Heaters, Inc., Seattle, Wash.

Oil

Acme Heat & Power Co., Inc., Brooklyn, N. Y. (Gun)
Acme Oil Burner Co., Inc., Cedar Rapids, Iowa. (Gun).
Air Filter Corp., Milwaukee, Wis. (Gun)
Airflame, Inc., Waukegan, Ill. (Gun)
Airtemp Div. Chrysler Corp., Dayton, Ohio. (Gun)
Aldrich Co., Wyoming, Ill. (Gun)
All-Gas Equipment Co., Milwaukee, Wis.
American Furnace Co., St. Louis, Mo. (Gun)
American Mohawk Co., Inc., New York, N. Y. (Gun)
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa. (Gun)
Anchor Div., Stratton & Terstegge Co., New Albany, Ind. (Gun)
Armstrong Furnace Co., Columbus, Ohio. (Gun)
Aston Products, Inc., Hazel Park, Mich. (Gun)
Auburn Burner Co., Auburn, Ind. (Gun)
Auto-Heat Corp., Middletown, Conn. (Gun)
Automatic Burner Corp., Chicago, Ill. (Gun)
Automatic Firing Corp., St. Louis, Mo. (Gun)
Bard Mfg. Co., Bryan, Ohio.
Beall Pipe & Tank Corp., Portland, Ore. (Range)
Beckett Corp., R. W., Elyria, Ohio (Gun).
Benner-Nawman, Inc., Oakland, Calif. (Gravity)
Bethlehem Foundry & Machine Co., Bethlehem, Pa. (Gun)
Beyer Oil Burner Co., Rosamond, Calif. (Gravity)
Boston Machine Works Co., Lynn, Mass. (Gravity)
Breese Burners, Inc., Santa Fe, N. Mex. (Gravity)
Breeze Corp., Inc., Newark, N. J. (Gun)
Bryan Steam Corp., Peru, Ind. (Gun)
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio. (Gun)
Caloroil Burner Corp., Hartford, Conn. (Gun, Rotary)
Carlin Co., United States Oil Burner Div., Wethersfield, Conn. (Gun)
Cary Mfg. Co., Waupaca, Wis. (Gun)
Catskill Metal Works, Inc., Catskill, N. Y. (Gun)
Century Engineering Corp., Cedar Rapids, Iowa. (Gun and gravity)
Certified Furnace Co., St. Paul, Minn. (Gun)
Chalmers Oil Burner Co., Minneapolis, Minn. (Gun and rotary).
Chandler Co., Cedar Rapids, Iowa (Gun)
Chicago Steel Furnace Co., Chicago, Ill.
Coal-O-Matic Co., Trucksville, Pa. (Gun)
Conco Engineering Works, Mendota, Ill. (Gun, vaporizing)
Connecticut State Furnace Co., Inc., Bridgeport, Conn. (Gun)
Consolidated Industries, Inc., Lafayette, Ind.
Crane Co., Chicago, Ill. (Gun).
Delco Appliance Div., General Motors Corp., Rochester, N. Y. (Gun)
D'Elia Oil Burner Co., Bridgeport, Conn. (Gun).
Delta Heating Corp., Trenton, N.J.
DeLuxe Oil Burner Co., Seattle, Wash.
Des Moines Furnace & Stove Repair Co., Des Moines, Iowa. (Gun)
DeSoto Oil Burner Corp., York, Pa. (Gun gravity)
Dowagiac Steel Furnace Co., Dowagiac, Mich. (Gun).
East Coast Co., Boston, Mass. (Gun)
Eastern Oil & Equipment Co., Portland, Maine. (Gun).
Eckhart Mfg. Co., Inc., Union, N. J. (Gun)
Eclipse Fuel Engineering Co., Rockford, Ill.
Eddy Stoker Corp., Chicago, Ill. (Gun)
Electric Furnace-Man, Inc., Emmaus, Pa. (Gun)
Electro-Watt Inc., Seattle, Wash. (Gun)
Electrol Burner Mfg. Co., Inc., Rutherford, N. J. (Gun)
Fairfield Oil Heating Co., Inc., Greenwich, Conn. (Gun)
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Floral City Heater Co., Monroe, Mich.
Flame-Master Co., Chicago, Ill.
Florence Stove Co., Gardner, Mass. (Gravity).
Fluid Heat Div., Anchor Post Products, Inc., Baltimore, Md. (Gun, rotary).
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio. (Gun)
Freeport Burner & Fan Co., Freeport, Ill. (Gun).
Fuel Savers, Inc., Harrisburg, Pa.
General Automatic Products Corp., Baltimore, Md. (Gun)
General Oil Heating Corp., West New York, N. J. (Gun)
Gilbert & Barker Mfg. Co., West Springfield, Mass. (Gun)
Gilmore & Co., Jackson G., Columbus, Ohio. (Vaporizing)
Green Colonial Furnace Co., Des Moines, Iowa (Gun).
Hall-Neal Furnace Co., Indianapolis, Ind. (Gun).
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill. (Gun)
Harvey, Inc., Sid, Valley Stream, N. Y. (Gun)
Harvey-Whipple, Inc., Springfield, Mass. (Gun).
Heatcraft Co., Louisville, Ky. (Gun)
Heating Specialties Co., Baltimore, Md. (Gravity)
Heat-Seal Burner Co., Omaha, Nebr. (Gun).
Heil Co., Milwaukee, Wis. (Gun).
Henry Furnace Co., Medina, Ohio (Gun)
Herco Oil Burner Corp., Lancaster, Pa. (Gun).
Hershey Machine & Foundry Co., Manheim, Pa. (Gun)
HomEase Products Div., Paterson, N. J. (Gun)
Homer Furnace & Foundry Corp., Coldwater, Mich. (Gun)
Hotentot Co., Inc., Omaha, Nebr. (Gun).
Howell Engineering Corp., Oregon, Ill. (Gun)
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Oil Burner Co., St. Louis, Mo. (Gun)
Iron Fireman Mfg. Co., Cleveland, Ohio. (Gun).
Jackson & Church Co., Saginaw, Mich. (Gun).
Johnson Co., S. T., Oakland, Calif. and Philadelphia, Pa. (Gun).
Junior Co., J. C., Kansas City, Mo.
Keith Furnace Co., Des Moines, Iowa. (Gun).
Kleen-Heet, Inc., Chicago, Ill. (Gun).
Kleer-Kleen Mfg. Co., Oakland, Calif. (Gravity)
Kol-Master Corp., Oregon, Ill. (Gun)
Ko-Z-Aire Products, Inc., Red Oak, Iowa (Gun)
Kresky Mfg. Co., Inc., Petaluma, Calif. (Gravity).
Kresno-Stamm Co., Palisades Park, N. J. (Gravity)
Laco Oil Burner Co., Inc., Griswold, Iowa. (Gun and Gravity).
Lennox Furnace Co., Marshalltown, Iowa. (Gun).
Little Burner Co., Inc., H. C., San Rafael, Calif. (Gravity).
Lynn Products Co., Lynn, Mass. (Gun)
McKee Furnace Co., Minneapolis, Minn. (Rotary)
McPherson Furnace & Supply Co., Portland, Ore. (Gun).
Majestic Co., Inc., Huntington, Ind. (Gun)
Malleable Iron Fittings Co., Branford, Conn. (Gun).
Mason Machine Co., Inc., York, Pa. (Gravity)
Mayflower Air Conditioners, Inc., St. Paul, Minn. (Gun)
Mechanical Products Co., Seattle, Wash. (Gun)
Metro Metal Mfg. Co., Holt, Mich. (Vaporizing)
Metromatic Mfg. Co., Everett, Mass.
Meyer Furnace Co., Peoria, Ill. (Gun & gravity).
Miller Co., Meriden, Conn. (Gravity)
Montag Stove & Furnace Works, Portland, Ore. (Gun).
Moore Equipment Co., Lincoln, Nebr. (Gun).
Mt. Hawley Mfg. Co., Peoria, Ill. (Gun).
Mueller Furnace Co., L. J., Milwaukee, Wis. (Gun)
National Airoil Burner Co., Inc., Philadelphia, Pa. (Gun)
National Fuel Conservation Co., Inc., White Plains, N. Y. (Gun)
National Oil Burner Co., Brooklyn, N. Y. (Gun, Rotary)
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich. (Gun)
Norman Products Co., Inc., Columbus, Ohio. (Gravity).
Northern Steel & Stoker Corp., Peoria, Ill. (Rotary)
Northwest Foundry & Furnace Co., Portland, Ore. (Gun)
Nu-Way Corp., Rock Island, Ill. (Gun).
Oil Equipment Laboratories, Inc., Elizabeth, N. J. (Gun).
Olsen Mfg. Co., The C. A., Elyria, Ohio (Gun)
Pan-American Engineering Co., Berkeley, Calif. (Gun, rotary & turbine).
Paragon Oil Burner Corp., Brooklyn, N. Y. (Gun).
Paramount Supply Co., Lincoln, Nebr. (Gun)
Penn Boiler & Burner Mfg. Corp., Lancaster, Pa. (Gun).
Perfection Stove Co., Cleveland, Ohio (Gun)
Petro Div., Iron Fireman Mfg. Co., Cleveland, Ohio (Gun)
Petroleum Heat & Power Co., Stamford, Conn. (Gun).
Preferred Utilities Mfg. Corp., New York, N. Y. (Rotary)
Premier Furnace Co., Dowagiac, Mich.

Quick Furnace & Supply Co., Des Moines, Iowa. (Gun)
Quiet Automatic Burner Corp., Newark, N. J. (Gun)
Quiet-Heet Mfg. Corp., Newark, N. J. (Gun).
Radiant Utilities Corp., Brooklyn, N. Y. (Gun)
Rapid Heat Corp., Detroit, Mich.
Ray Oil Burner Co., San Francisco, Calif. (Gun and rotary)
Rayfield Co., C. L., Chicago, Ill. (Gun & rotary).
Red Wing Oil Burner Co., Inc., Medford, Mass. (Gun)
Reichhelm Co., Robert, Stratford, Conn. (Gun)
Reif-Rexoil, Inc., Buffalo, N. Y. (Gun)
Richfield Mfg. Corp., New Rochelle, N. Y. (Gun)
Ronci Co., Inc., F., Centredale, R. I. (Gun)
Rossoe Mfg. Co., Seattle, Wash. (Gun)
Round Oak Co., Inc., of Ind., Dowagiac, Mich. (Gun)
Rybolt Heater Co., Ashland, Ohio. (Gun)
Sandberg Mfg. Co., Portland, Ore. (Gun)
Schwab Safe Co., Lafayette, Ind. (Gun)
Scott-Newcomb, Inc., St. Louis, Mo. (Gun)
Selectrol Engineering Co., Brooklyn, N. Y. (Gun)
Shedlov Oil Burners, Inc., Minneapolis, Minn. (Gun)
Silent Sioux Corp., Orange City, Iowa. (Gravity)
Simplex Oil Heating Corp., Philadelphia, Pa. (Gun, rotary, & turbine)
S-K Co., Inc., Camden, N. J.(Gun)
Standard Arcoil Corp., Newark, N. J. (Gun)
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Stokol Stoker Co., Inc., Dayton, Ohio. (Gun)
Sundstrand Engineering Co., Rockford, Ill. (Gun)
Sun-Fire Stoker Corp., New Albany, Ind. (Gun)
Sun-Ray Burner Mfg. Corp., Jamaica, N. Y. (Gun)
Swirling Heat Corp., Arlington, Va. (Vapor pressure)
Swirling Oil Burner Mfg. Corp., Long Island City, N. Y.
Synchronous Flame, Inc., Chicago, Ill. (Gun)
Syncromatic Corp., Watertown, Wis. (Gun)
Thatcher Furnace Co., Garwood, N. J.(Gun)
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich. (Gun & rotary).
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio. (Gun, rotary)
Tru-Heet Co., Trenton, N. J. (Gun)
Twin Control Burner Mfg. Co., New York, N. Y. (Gun)
U. S. Machine Corp., Lebanon, Ind. (Gun)
United States Radiator Corp., Detroit, Mich. (Gun).
Universal Steel Fabricating Co., Seattle, Wash. (Gun)
Viking Mfg. Corp., Cleveland, Ohio. (Gun)
Volcano Burner Corp., New York, N. Y. (Gun).
Waltham Oil Burner Co., E. Boston, Mass. (Gun)
Waterman-Waterbury Co., Minneapolis, Minn. (Gun).
Wayne Home Equipment Co., Inc., Fort Wayne, Ind. (Gun)
Weatherall Engineers, Inc., Providence, R. I. (Gun).
Westwick & Son, Inc., John, Galena, Ill. (Gun).
Will-Burt Co., Orrville, Ohio (Gun)
Williams Oil-O-Matic Div., Eureka-Williams Corp., Bloomington, Ill. (Gun)
Williamson Heater Co., Cincinnati, O. (Gun)
Wisconsin Oil Burner Co., Madison, Wis. (Gun)
York-Shipley, Inc., York, Pa. (Gun).

BURRING MACHINES

See Machines, Burring

CABINETS AND CASINGS

Airwasher Corp., Eaton Rapids, Mich.
Armstrong Furnace Co., Columbus, Ohio.
Atlas Mfg. Co., St. Paul, Minn.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Berger Mfg. Co., Div. of Republic Steel Corp., Canton, Ohio.
Biersach & Neidermeyer Co., Milwaukee, Wis.
Brundage Co., Kalamazoo, Mich.
Chicago Metal Mfg. Co., Chicago, Ill.
Dahlstrom Metallic Door Co., Jamestown, N. Y. (Special)
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Harrison Sheet Steel Co., Chicago, Ill.
Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Lau Blower Co., Dayton, Ohio.
Lindsay Structure, Inc., Skokie, Ill.
Maysteel Products, Inc., Milwaukee, Wis.
Moss Industries, Inc., Brooklyn, N. Y.
Northwest Foundry & Furnace Co., Portland, Ore.
Riester & Thesmacher Co., Cleveland, Ohio.
St. Charles Mfg. Co., St. Charles, Ill.
Skinner Heating & Ventilating Co., St. Louis, Mo.
Thermo-Products, Inc., North Judson, Ind.
Utica Products, Inc., Utica, N. Y.
Zick Sheet Metal Works, Dearborn, Mich.

CAPS AND TOPS, CHIMNEY

Accurate Sheet Metal & Mfg. Works, Chicago, Ill.
Acme Mfg. Co., Philadelphia, Pa.
Adams Co., Dubuque, Iowa.
Airjet Ventilator Co., Pasadena, Calif.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bieler & Sons, Inc., L., Long Island City, N. Y.
Breidert Co., G. C., Los Angeles, Calif.
Coleman Co., Inc., Wichita, Kans. (Crowns)
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Excelsior Steel Furnace Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Inland Steel Products Co., Milwaukee, Wis.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Penn Supply & Metal Corp., Philadelphia, Pa.
Penn Ventilator Co., Philadelphia, Pa.
Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sioux Steel Co., Sioux Falls, S. D.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Sterling Foundry Co., Sterling, Ill. (Cast Iron).
Tesco, Inc., Tulsa, Okla.
Tierney Rotor Ventilator Co., Minneapolis, Minn.
Walker Mfg. & Sales Corp., St. Joseph, Mo.
Waverly Heating Supply Co., Boston, Mass.
Wallace Co., William, Metalbestos Div., Belmont, Calif.

CASINGS

See Cabinets and Casings

CAULKING COMPOUNDS

See Compounds, Caulking

CEILINGS, METAL

Alden Mfg. Co., Painesville, Ohio
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Friedley-Voshart Co., Chicago, Ill.
Harrison Sheet Steel Co., Chicago, Ill.
Hauserman Co., E. F., Cleveland, Ohio.
Klauer Mfg. Co., Dubuque, Iowa.
Reynolds Metals Co., Louisville, Ky. (Aluminum).
Tennessee Coal, Iron & Railroad Co., Fairfield, Ala.
Tiffin Art Metal Co., Tiffin, Ohio.
Wheeling Corrugating Co., Wheeling, W. Va.

CEMENT

Furnace

Acme Asbestos Covering & Flooring Co., Chicago, Ill.
Armstrong Co., Detroit, Mich.
Botfield Refractories Co., Philadelphia, Pa.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Chicago Fire Brick Co., Chicago, Ill.
Clinton Metallic Paint Co., Clinton, N. Y.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Fireline Stove & Furnace Lining Co., Chicago, Ill. (Asbestos).
Hercules Chemical Co., Inc., New York, N. Y.
Hetzel Roofing Products Co., Newark, N. J.
Johns-Manville, New York, N. Y.
Keasbey Co., Robert A., New York, N. Y.
Laclede-Christy Co., St. Louis, Mo.
Lastik Products Co., Inc., Pittsburgh, Pa.
McLeod & Henry Co., Inc., Troy, N. Y.
Nebel Mfg. Co., Cleveland, Ohio.
Pecora Paint Co., Philadelphia, Pa.
Plastic Products Co., Detroit, Mich.
Preferred Utilities Mfg. Corp., New York, N. Y.
Presstite Engineering Co., St. Louis, Mo.
Quigley Co., Inc., New York, N. Y.
Refractory & Insulation Corp., New York, N. Y.
Rutland Fire Clay Co., Rutland, Vt.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Sall Mountain Co., Hamilton, Ohio.
Sauereisen Cements Co., Pittsburgh, Pa.
Smooth-on Mfg. Co., Jersey City, N. J.
Standard Asbestos Mfg. Co., Chicago, Ill.
Standard Fuel Engineering Co., Detroit, Mich.
Tamms Industries, Inc., Chicago, Ill.
United Gilsonite Laboratories, Scranton, Pa.
Walsh Refractories Corp., St. Louis, Mo.
Wilson, Inc., Grant, Chicago, Ill.

Insulating

Acme Asbestos Covering & Flooring Co., Chicago, Ill. (Asbestos, mineral wool & magnesia).

Alton Mineral Wool Insulation Co., St. Louis, Mo. (High temperature).
Armstrong Cork Co., Lancaster, Pa.
Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
Bird Archer Co., Philadelphia, Pa.
Botfield Refractories Co., Philadelphia, Pa.
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Asbestos, magnesia, rock wool)
Chicago Fire Brick Co., Chicago, Ill. (Asbestos).
Denver Fire Clay Co., Denver, Colo. (Vermiculite & rock wool; high temperature)
Eagle-Picher Co., Cincinnati, Ohio.
Ehret Magnesia Mfg. Co., Valley Forge, Pa. (Asbestos).
Green Fire Brick Co., A. P., Mexico, Mo. (Mineral wool)
Hallemite Mfg. Co., Cleveland, Ohio
Hetzel Roofing Products Co., Newark, N. J.
International Vermiculite Co., Girard, Ill.
Johns-Manville, New York, N. Y. (Asbestos).
Keasbey Co., Robert A., New York, N. Y. (Asbestos).
Keasbey & Mattison Co., Ambler, Pa. (Asbestos).
Laclede-Christy Co., St. Louis, Mo. (Asbestos).
McLeod & Henry Co., Inc., Troy, N. Y.
Mundet Cork Corp., North Bergen, N. J. (Magnesia).
National Fuel Conservation Co., Inc., White Plains, N. Y.
Norristown Magnesia & Asbestos Co., Norristown, Pa. (Asbestos, rockwool & magnesia).
Ohmlac Paint & Refining Co., Chicago, Ill. (Asphalt & asbestos,.
Owens-Corning Fiberglas Corp., Toledo, Ohio. (Glass fiber).
Pabco Products, Inc., San Francisco, Calif.
Peterson Co., B. A., Dowagiac, Mich. (Asbestos).
Preferred Utilities Mfg. Corp., New York, N. Y.
Pyrolite Products Co., Cleveland, Ohio.
Quigley Co., Inc., New York, N. Y. (Asbestos).
Ramtite Co., Div. of Obermayer Co., Chicago, Ill.
Refractory & Insulation Corp., New York, N. Y. (Castable refractory).
Rex Roto Corp., Detroit, Mich.
Robinson Insulation Co., Great Falls, Mont. (Vermiculite).
Ruberoid Co., New York, N. Y. (Asbestos).
Rutland Fire Clay Co., Rutland, Vt. (Asbestos).
Sall Mountain Co., Hamilton, Ohio.
Sauereisen Cements Co., Pittsburgh, Pa.
Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos).
Standard Fuel Engineering Co., Detroit, Mich. (Rock wool & asbestos).
Thompson & Co., Oakmont, Pa. (Asbestos).
United States Mineral Wool Co., South Milwaukee, Wis. (Mineral wool)
Walsh Refractories Corp., St. Louis, Mo.
Western Mineral Products Co., Minneapolis, Minn. (Vermiculite)
Wilson, Inc., Grant, Chicago, Ill. (Asbestos).
Zonolite Co., Chicago, Ill. (Vermiculite).

Roof

Acme Asbestos Covering & Flooring Co., Chicago, Ill.
American-Marietta Co., Chicago, Ill.
Armstrong Co., Detroit, Mich.
Baer Bros., New York, N. Y.
Barrett Div. Allied Chemical & Dye Corp., New York, N. Y.
Bird & Son, Inc., East Walpole, Mass.
Blue Ridge Talc Co., Inc., Henry, Va.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Carey Mfg. Co., Philip, Cinncinnati, Ohio.
Carter Paint Co., Liberty, Ind.
Celotex Corp., Chicago, Ill.
Certain-teed Products Corp., Ardmore, Pa.
Clinton Metallic Paint Co., Clinton, N. Y.
Continental Products Co., Euclid, Ohio.
Coopers Creek Chemical Corp., West Conshohocken, Pa.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Flintkote Co., New York, N. Y.
Glidden Co., Cleveland, Ohio.
Hallemite Mfg. Co., Cleveland, Ohio
Hetzel Roofing Products Co., Newark, N. J.
Horn Co., Inc., A. C., Long Island City, N. Y.
Inland Steel Products Co., Milwaukee, Wis.
Iowa Paint Mfg. Co., Des Moines, Iowa. (Asphalt).
Iron-Hide Sales Co., Matawan, N.J.
Johns-Manville, New York, N. Y.
Koppers Co., Inc., Pittsburgh, Pa.
Lastik Products Co., Inc., Pittsburgh, Pa.
Lehon Co., Chicago, Ill.
Meadows, Inc., W. R., Elgin, Ill.
Midland Paint & Varnish Co., Cleveland, Ohio.
National Mfg. Corp., Tonawanda, N. Y.
Nebel Mfg. Co., Cleveland, Ohio.
North American Mogul Products Co., Cleveland, Ohio.
Ohmlac Paint & Refining Co., Chicago, Ill.
Pecora Paint Co., Philadelphia, Pa. (Asbestos).
Potts-Farrington Co., Philadelphia, Pa.
Presstite Engineering Co., St. Louis, Mo.
Ruberoid Co., New York, N. Y.
Rutland Fire Clay Co., Rutland, Vt.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Smooth-On Mfg. Co., Jersey City, N. J.
Sonneborn Sons, Inc., L., New York, N. Y.
Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
Thompson & Co., Oakmont, Pa.
Tropical Paint & Oil Co., Cleveland, Ohio.
United Gilsonite Laboratories, Scranton, Pa.
United States Gypsum Co., Chicago, Ill.

CEMENT, REFRACTORY

See Refractories

CHAIN, FURNACE

Bead Chain Mfg. Co., Bridgeport, Conn.
Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
Hart & Cooley Mfg. Co., Holland, Mich.
Hodell Chain Co., Cleveland, Ohio.
McKay Co., Pittsburgh, Pa.
Russell Mfg. Co., Inc., John M., Naugatuck, Conn.
Turner & Seymour Mfg. Co., Torrington, Conn.
United States Register Co., Battle Creek, Mich.
Wright Hoist Div., American Chain & Cable Co., Inc., York, Pa.

CHAMBERS, COMBUSTION, PREFORMED

Amerform Corp., Philadelphia, Pa.
Boston Machine Works Co., Lynn, Mass. (Insulating brick)
Certified Furnace Co., St. Paul, Minn. (Firebrick).
Chicago Fire Brick Co., Chicago, Ill. (Fire clay).
Green Fire Brick Co., A. P., Mexico, Mo. (Fire clay, insulating brick).
Harvey, Inc., Sid, Valley Stream, N. Y.
Hasko Utilities Co., New York, N. Y. (Refractory).
Insulation & Refractories Co., Williamson, N. Y. (Refractory concrete & insulating refractory).
Kolb Refractories Co., Philadelphia, Pa.
Laclede-Christy Co., St. Louis, Mo.
McLeod & Henry Co., Inc., Troy, N. Y.
Mechanical Products Co., Seattle, Wash. (Chrome steel).
Monogram Products Co., Inc., Philadelphia, Pa. (Insulating refractory).
National Airoil Burner Co., Inc., Philadelphia, Pa.
Oil Equipment Mfg. Co., New Haven, Conn. (Inconel).
Peterson Co., B. A., Dowagiac, Mich.
Preferred Utilities Mfg. Corp., New York, N. Y.
Refractory & Insulation Corp., New York, N. Y. (Refractory).
Relim, R., St. Albans, N. Y. (Radiant silicons).
Rex Roto Corp., Detroit, Mich.
Robinson Insulation Co., Great Falls, Mont.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Sandberg Mfg. Co., Portland, Ore. (Stainless steel).
Stefco Steel Co., Michigan City, Ind.
Universal Zonolite Insulation Co., Chicago, Ill. (Vermiculite concrete).
Walsh Refractories Corp., St. Louis, Mo. (Refractory).
Webber Co., A. R., New Haven, Conn. (Refractory).

CHANNELS

See Angles, Bars, Beams, Channels and Tees (Light Weight Shapes)

CHEMICALS, RUST PREVENTIVE

American Chemical Paint Co., Ambler, Pa.
Carbide & Carbon Chemicals Co., Div. Union Carbide & Carbon Corp., New York, N. Y.
Cristy Specialty Corp., Worcester, Mass.
Industrial Service Laboratories, Milwaukee, Wis.
Klem Chemicals, Inc., Dearborn; Mich.
Magnus Chemical Co., Garwood, N.J.
Neilson Chemical Co., Detroit, Mich.
North American Mogul Products Co., Cleveland, Ohio.
Oakite Products, Inc., New York, N. Y.
Parker Rust-Proof Co., Detroit, Mich.
Pennsylvania Refining Co., Ohio Div., Cleveland, Ohio.
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.
Protective Coatings, Inc., Detroit, Mich. (Remover).
Rossaul Co., New York, N. Y.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Solvay Process Div., Allied Chemical & Die Corp., New York, N. Y.
Sudbury Laboratory, South Sudbury, Mass.

Truscon Laboratories, Detroit, Mich.
Turco Products, Inc., Los Angeles, Calif.
Western Reserve Laboratories, Cleveland, Ohio.
Wolfe-Kote Co., Sheboygan, Wis.

CHIMNEY CAPS

See Caps and Tops, Chimney

CHIMNEY LININGS

See Linings, Chimney

CHIMNEYS, PREFABRICATED

Chimney Sales Corp., Fredricksburg, Va.
Condensation Engineering Corp., Chicago, Ill. (Vitreous enamel).
General Products Co., Fredericksburg, Va.
Van-Packer Corp., Chicago, Ill.
Wallace Co., William, Metalbestos Div., Belmont, Calif.

CLEANERS, AIR ELECTRICAL

See Filters, Air, Electrostatic

CLEANERS, POLISHERS AND FINISHERS, METAL

Allen Co., Inc., L. B., Chicago, Ill. (Stainless steel & monel).
American Chemical Paint Co., Ambler, Pa.
Ampion Corp., Long Island City, N. Y. (All metals).
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (All metals).
Klem Chemicals, Inc., Dearborn, Mich.
Magnus Chemical Co., Garwood, N. J.
NuSteel Co., Chicago, Ill. (Aluminum & stainless steel).
Oakite Products, Inc., New York, N. Y.
Parker Rust-Proof Co., Detroit, Mich.
Pennsylvania Salt Mfg. Co., Philadelphia, Pa. (Ferrous and non-ferrous)
Protective Coatings, Inc., Detroit, Mich.
Rossaul Co., New York, N. Y.
Standard Steel Spring Co., Gary, Ind.
Tamms Industries Inc., Chicago, Ill.
Truscon Laboratories, Detroit, Mich.
Turco Products, Inc., Los Angeles, Calif.
Western Reserve Laboratories, Cleveland, Ohio.
Wolfe-Kote Co., Sheboygan, Wis.

CLEANERS, VACUUM, FURNACE

Ace Co., Ocala, Fla.
Baker Furnace & Cleaner Mfg. Co., Toledo, Ohio.
Breuer Electric Mfg. Co., Chicago, Ill.
Chicago Blower Corp., Franklin Park, Ill.
Doyle Vacuum Cleaner Co., Grand Rapids, Mich.
Empire Chemical Products Co., Newark, N. J.
General Blower Co., Morton Grove, Ill.
Hasko Utilities Co., New York, N. Y.
Ideal Industries, Inc., Sycamore, Ill.
Kent Co., Inc., Rome, N. Y.
Molloy Machine Corp., Chicago, Ill.
National Super Service Co., Inc., Toledo, Ohio.
Pullman Vacuum Cleaner Co., Boston, Mass.
Spencer Turbine Co., Hartford, Conn.

CLEAT BENDERS

See Machines, Cleat Bending

CLEATS, DRIVE

See Connectors, Metal

CLIPS, FASTENING, ROOFING

Bard Mfg. Co., Bryan, Ohio.
Berger Bros. Co., Philadelphia, Pa.
Bridesburg Foundry Co., Philadelphia, Pa.
Diamond Expansion Bolt Co., Inc., Garwood, N. J.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Inland Steel Products Co., Milwaukee, Wis.
Lexington Supply Co., Cleveland, Ohio.
Southbridge Roofing Co., Inc., Southbridge, Mass.

CLIPS AND TIPS, DAMPER

Adams Co., Dubuque, Iowa.
Air Control Products, Inc., Coopersville, Mich.
Berger Bros. Co., Philadelphia, Pa.
Gerett Corp., M. A., Milwaukee, Wis.
Griswold Mfg. Co., Erie, Pa.
Hart & Cooley Mfg. Co., Holland, Mich.
Howes-Woods Co., Cambridge, Mass.
Kerentoff, G. L., Cincinnati, Ohio.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Severson Mfg. & Supply Co., Milwaukee, Wis.
United States Register Co., Battle Creek, Mich.
Young Regulator Co., Cleveland, Ohio.

CO_2 ANALYZERS

See Analyzers, CO_2

COAL BURNERS, AUTOMATIC

See Stokers

COATINGS, PROTECTIVE, FOR METALS

See Waterproofing, Coating Material

COILS

Cooling, Direct Expansion

Acme Industries, Inc., Jackson, Mich.
Aerofin Corp., Syracuse, N. Y.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
American Blower Corp., Detroit, Mich.
American Coils, Inc., Newark, N. J.
Beacon-Morris Corp., Boston, Mass.
Betz Corp., Hammond, Ind.
Bohn Aluminum & Brass, Detroit, Mich.
Bush Mfg. Co., West Hartford, Conn.
Carrier Corp., Syracuse, N. Y.
Conditionaire Unit Co., Chicago, Ill.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Frick Co., Waynesboro, Pa.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
Governair Corp., Oklahoma City, Okla.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Howe Ice Machine Co., Chicago, Ill.
Industrial Mfg. & Engineering Co., Chicago, Ill.
International Mfg. Co., Oklahoma City, Okla.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kennard Corp., St. Louis, Mo.
Kramer Trenton Co., Trenton, N. J.
Larkin Coils, Inc., Atlanta, Ga.
McCord Corp., Detroit, Mich.
McQuay, Inc., Minneapolis, Minn.
Marlo Coil Co., St. Louis, Mo.
Mitchell & Co., Inc., W. K., Philadelphia, Pa.
Modine Mfg. Co., Racine, Wis.
Murray Mfg. Co., D. J., Wausau, Wis.
Nevinger Mfg. Co., Inc., Greenville, Ill.
Niagara Blower Co., New York, N. Y.
Patterson-Kelley Co., Inc., East Stroudsburg, Pa.
Peerless of America, Inc., Chicago, Ill.
Refrigeration Appliances, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, Ohio.
Rempe Co., Chicago, Ill.
Rigidbilt, Inc., Chicago, Ill.
Rinehart, Inc., Richmond, Ind.
Roessing Mfg. Co., Sharpsburg Sta., Pittsburgh, Pa.
Rome-Turney Radiator Co., Rome, N. Y.
Super Radiator Corp., Minneapolis, Minn.
Tenney Engineering, Inc., Newark, N. J.
Trane Co., The, La Crosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
United States Air Conditioning Corp., Minneapolis, Minn.
Vilter Mfg. Co., Milwaukee, Wis.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Worthington Corp., Harrison, N. J.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

Cooling, Water

Acme Industries, Inc., Jackson, Mich.
Aerofin Corp., Syracuse, N. Y.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
Beacon-Morris Corp., Boston, Mass.
Bohn Aluminum & Brass, Detroit, Mich.
Bush Mfg. Co., West Hartford, Conn.
Campbell Co., F. K., Kansas City, Mo.
Carrier Corp., Syracuse, N. Y.
Chicago Fan & Fin Coil Co., Chicago, Ill.
Conditionaire Unit Co., Chicago, Ill.
Drayer-Hanson, Inc., Los Angeles, Calif.
Frick Co., Waynesboro, Pa.
Frigidaire Div. General Motors Corp., Dayton, Ohio.
G & O Mfg. Co., New Haven, Conn.
Governair Corp., Oklahoma City, Okla.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Howe Ice Machine Co., Chicago, Ill.
Industrial Mfg. & Engineering Co., Chicago, Ill.
International Mfg. Co., Oklahoma City, Okla.
Kauffman Air Conditioning Corp., St. Louis, Mo.

Kennard Corp., St. Louis, Mo.
Kramer Trenton Co., Trenton, N. J.
Larkin Coils, Inc., Atlanta, Ga.
McCord Corp., Detroit, Mich.
McQuay, Inc., Minneapolis, Minn.
Marlo Coil Co., St. Louis, Mo.
Modine Mfg. Co., Racine, Wis.
Murray Mfg. Co., D. J., Wausau, Wis.
National Pipe Bending Co., New Haven, Conn.
Nesbitt, Inc., John J., Philadelphia, Pa.
Nevinger Mfg. Co., Inc., Greenville, Ill.
Niagara Blower Co., New York, N. Y.
Patterson-Kelley Co., Inc., East Stroudsburg, Pa.
Peerless of America, Inc., Chicago, Ill.
Refrigeration Appliances, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, Ohio.
Rempe Co., Chicago, Ill.
Rigidbilt, Inc., Chicago, Ill.
Roessing Mfg. Co., Sharpsburg Sta., Pittsburgh, Pa.
Rome-Turney Radiator Co., Rome, N. Y.
Super Radiator Corp., Minneapolis, Minn.
Tenney Engineering, Inc., Newark, N. J.
Trane Co., La Crosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
United States Air Conditioning Corp., Minneapolis, Minn.
Vilter Mfg. Co., Milwaukee, Wis.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Whitlock Mfg. Co., Hartford, Conn.
Wing Mfg. Co., L. J., Linden, N.J.
Worthington Corp., Harrison, N. J.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

Heating

Aerofin Corp., Syracuse, N. Y.
American Blower Corp., Detroit, Mich.
American Coils, Inc., Newark, N. J.
Bayley Blower Co., Milwaukee, Wis.
Beacon-Morris Corp., Boston, Mass.
Bohn Aluminum & Brass, Detroit, Mich.
Bush Mfg. Co., West Hartford, Conn.
Campbell Co., E. K., Kansas City, Mo.
Chicago Fan & Fin Coil Co., Chicago, Ill.
Conditionaire Unit Co., Chicago, Ill.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
G & O Mfg. Co., New Haven, Conn.
Governair Corp., Oklahoma City, Okla.
Howe Ice Machine Co., Chicago, Ill.
Industrial Mfg. & Engineering Co., Chicago, Ill.
International Mfg. Co., Oklahoma City, Okla.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kennard Corp., St. Louis, Mo.
Kramer Trenton Co., Trenton, N. J.
Larkin Coils, Inc., Atlanta, Ga.
McCord Corp., Detroit, Mich.
McQuay, Inc., Minneapolis, Minn.
Marlo Coil Co., St. Louis, Mo.
Modine Mfg. Co., Racine, Wis.
Murray Mfg. Co., D. J., Wausau, Wis.
National Pipe Bending Co., New Haven, Conn.
Nesbitt, Inc., John J., Philadelphia, Pa.
Nevinger Mfg. Co., Inc., Greenville, Ill.
New York Blower Co., Chicago, Ill.
Niagara Blower Co., New York, N. Y.
Patterson-Kelley Co., Inc., East Stroudsburg, Pa.
Refrigeration Appliances, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, Ohio.
Rempe Co., Chicago, Ill.
Rigidbilt, Inc., Chicago, Ill.
Roessing Mfg. Co., Pittsburgh, Pa.
Rome-Turney Radiator Co., Rome, N. Y.
Super Radiator Corp., Minneapolis, Minn.
Tenney Engineering, Inc., Newark, N. J.
Trane Co., La Crosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
United States Air Conditioning Corp., Minneapolis, Minn.
Vulcan Radiator Co., Hartford, Conn.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Whitlock Mfg. Co., Hartford, Conn.
Wing Mfg. Co., L. J., Linden, N.J.
Worthington Corp., Harrison, N. J.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

COILS, FIRE POT, DOMESTIC HOT WATER

Adams Co., Dubuque, Iowa.
Air Controls, Inc., Cleveland, Ohio.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Globe Machinery & Supply Co., Des Moines, Iowa.
Marshall Furnace Co., Marshall, Mich.
Rempe Co., Chicago, Ill.

COLLECTORS, BLOW PIPE

Aerotec Corp., The, Greenwich, Conn.
Aget-Detroit Co., Ann Arbor, Mich.
American Air Filter Co., Inc., Louisville, Ky.
Blower Application Co., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
Carolina Blower Co., Inc., Greensboro, N. C.
Centri-Spray Co., Detroit, Mich.
Chicago Blower Corp., Franklin Park, Ill.
Day Co., Minneapolis, Minn.
Dust Suppression & Engineering Co., Lake Orion, Mich.
Goergen-Mackwirth Engineering Co., Buffalo, N. Y. (Rarified & Cyclone)
Goethel Sheet Metal Works, Inc., Alfred, Milwaukee, Wis.
Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Litman, Morris, Springfield, Mass.
Lumm Co., A. H., Toledo, Ohio.
Newcomb-Detroit Co., Detroit, Mich.
Northern Blower Co., Cleveland, Ohio.
Pangborn Corp., Hagerstown, Md.
Peters-Dalton, Inc., Detroit, Mich.
Puhl & Hepper Mfg. Co., Inc., St. Louis, Mo.
Ruemelin Mfg. Co., Milwaukee, Wis.
Skinner Heating & Vent Co., St. Louis, Mo.
Sly Mfg. Co., W. W., Cleveland, Ohio.
Stranwitz & Co., Inc., W. J., Camden, N. J.
Torit Mfg. Co., St. Paul, Minn.
Western Blower Co., Seattle, Wash.
Western Precipitation Corp., Los Angeles, Calif.
Winkler & Sons, Inc., A. E., Milwaukee, Wis.
Young & Bertke Co., Cincinnati, Ohio.

COMBUSTION CHAMBERS

See Chambers, Combustion, Preformed; Baffles, Combustion Chamber, Oil Burner and Stoker

COMBUSTION CONTROLS

See Controls; Dampers, Draft

COMPOUNDS, AIR FRESHENING

Carbide & Carbon Chemicals Co., Div. Union Carbide & Chemical Corp., New York, N. Y.

COMPOUNDS, CAULKING

Acme Refining Co., Cleveland, Ohio.
Allmetal Weatherstrip Co., Chicago, Ill.
American Fluresit Co., Cincinnati, Ohio.
American-Marietta Co., Chicago, Ill.
Armstrong Co., Detroit, Mich.
Babbitt Chemical Specialties Co., New Bedford, Mass.
Baer Bros., New York, N. Y.
Blue Ridge Talc Co., Inc., Henry, Va.
Calbar Paint & Varnish Co., Philadelphia, Pa. (Also caulking guns)
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Colored)
Carter Paint Co., Liberty, Ind.
Chamberlin Co. of America, Detroit, Mich.
Cheesman-Elliot Co., Inc., Brooklyn, N. Y.
Continental Products Co., Euclid, Ohio.
Division Lead Co., Chicago, Ill.
Glidden Co., Cleveland, Ohio.
Goodrich Co., B. F., Akron, Ohio.
Hercules Chemical Co., Inc., New York, N. Y.
Hetzel Roofing Products Co., Newark, N. J.
Horn Co., Inc., A. C., Long Island City, N. Y.
Iowa Paint Mfg. Co., Des Moines, Iowa.
Irvington Varnish & Insulator Co., Irvington, N. J.
Johns-Manville, New York, N. Y.
Lastik Products Co., Inc., Pittsburgh, Pa.
Lehon Co., Chicago, Ill.
Metropolitan Refining Co. Inc., Long Island City, N. Y.
Midland Paint & Varnish Co., Cleveland, Ohio.
Mortell Co., J. W., Kankakee, Ill.
National Mfg. Corp., Tonawanda, N. Y.
Nebel Mfg. Co., Cleveland, Ohio.
North American Mogul Products Co., Cleveland, Ohio.
Ohmlac Paint & Refining Co., Chicago, Ill. (Asphalt).
Pabco Products, Inc., San Francisco, Calif.
Pecora Paint Co., Philadelphia, Pa.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Plastic Products Co., Detroit, Mich.
Presstite Engineering Co., St. Louis, Mo.
Quigley Co., Inc., New York, N. Y.
Robertson Co., H. H., Pittsburgh, Pa.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Sherwin-Williams Co., Cleveland, Ohio.
Sipe & Co., James B., Pittsburgh, Pa.
Smooth-on Mfg. Co., Jersey City, N. J.
Sonneborn Sons, Inc., L., New York, N. Y.
Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
Tamms Industries Inc., Chicago, Ill.
Thompson & Co., Oakmont, Pa.
Tropical Paint & Oil Co., Cleveland, Ohio.
Truscon Laboratories, Detroit, Mich.
X-Pando Corp., Long Island City, N. Y.

COMPOUNDS, CLEANING, AIR FILTER

Carbide & Carbon Chemicals Co., Div. Union Carbide & Carbon Corp., New York, N. Y.
Carolina Aniline & Extract Co., Inc., Charlotte, N. C. (Humidifying systems).
Magnus Chemical Co., Garwood, N.J.
Oakite Products, Inc., New York, N. Y.
Turco Products, Inc., Los Angeles, Calif.

COMPRESSORS, REFRIGERATING

Airtemp Div. Chrpsler Corp., Dayton, Ohio.
Baker Refrigeration Corp., South Windham, Maine.
Brunner Mfg. Co., Utica, N. Y.
Carrier Corp., Syracuse, N. Y.
Copeland Refrigeration Corp., Sidney, Ohio.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Diceler Div. General Machine & Mfg. Co., Berwick, Pa.
Frick Co., Waynesboro, Pa.
Frigidaire Div. General Motors Corp., Dayton, Ohio.
General Machinery Co., Spokane, Wash. (Ammonia).
Howe Ice Machine Co., Chicago, Ill.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kelvinator Div., Nash-Kelvinator Corp., Detroit, Mich.
Lehigh Mfg. Co., Lancaster, Pa.
Lynch Corp., Toledo, Ohio.
Mills Industries, Inc., Chicago, Ill.
Reynolds Mfg. Co., Springfield, Mo.
Schnacke, Inc., Evansville, Ind.
Servel, Inc., Evansville, Ind.
Tecumseh Products Co., Tecumseh, Mich.
Trane Co., LaCrosse, Wis.
Vilter Mfg. Co., Milwaukee, Wis.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Worthington Corp., Harrison, N. J.
Yeomans Bros. Co., Melrose Park, Ill.
York Corp., York, Pa.

CONDENSERS, REFRIGERATING

Air Cooled

Baker Refrigeration Corp., South Windham, Maine
Brunner Mfg. Co., Utica, N. Y.
Buffalo Forge Co., Buffalo, N. Y.
Condenser Service & Engrg. Co., Inc., Hoboken, N. J.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Fedders-Quigan Corp., Buffalo, N. Y.
Frick Co., Waynesboro, Pa.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
Heat-X-Changer Co., The, Brewster, N. Y. (1/3 hp to 5 hp)
Howe Ice Machine Co., Chicago, Ill.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kramer Trenton Co., Trenton, N. J.
Rome-Turney Radiator Co., Rome, N. Y.
Super Radiator Corp., Minneapolis, Minn.
Westinghouse Elec. Corp., Sturtevant Div., Boston, Mass.
York Corp., York, Pa.

Evaporative

Acme Industries, Inc., Jackson, Mich.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
Baltimore Aircoil Co., Inc., Baltimore, Md.
Brunner Mfg. Co., Utica, N. Y.
Buffalo Forge Co., Buffalo, N. Y.
Condenser Service & Engineering Co., Inc., Hoboken, N. J.
Crowell & Dunn, Inc., New York, N. Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Frick Co., Waynesboro, Pa.
Frigidaire Div., General Motors Corp., Dayton, O.
Governair Corp., Oklahoma City, Okla.
Howe Ice Machine Co., Chicago, Ill.
Harry Cooling Towers, Inc., New York, N. Y.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kennard Corp., St. Louis, Mo.
Kramer Trenton Co., Trenton, N. J.
Marlo Coil Co., St. Louis, Mo.
McQuay, Inc., Minneapolis, Minn.
Niagara Blower Co., New York, N. Y.
Refrigeration Appliances, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, O.
Refrigeration Engineering, Inc., Los Angeles, Calif.
Tenney Engineering, Inc., Newark, N. J.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
Vilter Mfg. Co., Milwaukee, Wis.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Worthington Corp., Harrison, N. J.
XL Refrigerating Co., Chicago, Ill.
York Corp., York, Pa.

Shell and Coil

Acme Industries, Inc., Jackson, Mich.
Armstrong Co., Richard M., Westchester, Pa.
Autorad Inc., Chicago, Ill.
Brown Fintube Co., The, Elyria, O.
Condenser Service & Engineering Co., Inc., Hoboken, N. J.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Davis Engineering Corp., Elizabeth, N. J.
Dersch, Gesswein & Neuert, Inc., Chicago, Ill.
Doyle & Roth Mfg. Co., Brooklyn, N .Y.
Drayer-Hanson, Inc., Los Angeles, Calif.
Frick Co., Waynesboro, Pa.
General Fittings Co., Providence, R. I.
Halstead & Mitchell, Pittsburgh, Pa. (Double tube)
Heat-X-Changer Co., Inc., The, Brewster, N. Y.
Howe Ice Machine Co., Chicago, Ill.
Nooter Corp., St. Louis, Mo.
Patterson-Kelley Co., Inc., The, East Stroudsburg, Pa.
Reco Products Div., Refrigeration Engineering Corp., New York, N. Y.
Refrigeration Economics Co., Inc., Canton, O.
Rempe Co., Chicago, Ill.
Rome-Turney Radiator Co., Rome, N. Y.
X L Refrigerating Co., Chicago, Ill.

Shell and Tube

Acme Industries, Inc., Jackson, Mich.
Andale Co., Philadelphia, Pa.
Autorad Inc., Chicago, Ill.
Armstrong Co., Richard M., Westchester, Pa.
Biggs Boiler Works Co., E., Akron, O.
Brown Fintube Co., The, Elyria, O.
Condenser Service & Engineering Co., Inc., Hoboken, N. J.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Davis Engineering Corp., Elizabeth, N. J.
Devine Mfg. Co., J. P., Div. of H. K. Porter Co., Inc., Pittsburgh, Pa.
Doyle & Roth Mfg. Co., Brooklyn, N. Y.
Drayer-Hanson, Inc., Los Angeles, Calif.
Frick Co., Waynesboro, Pa.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
Howard Iron Works & Alberger Heater Div., Buffalo, N. Y.
Howe Ice Machine Co., Chicago, Ill.
Nooter Corp., St. Louis, Mo.
Patterson-Kelley Co., Inc., The, East Stroudsburg, Pa.
Reco Products Div., Refrigeration Engineering Corp., New York, N. Y.
Refrigeration Economics Co., Inc., Canton, O.
Reliance Refrigerating Machine Co., Chicago, Ill.
Semet-Solvay Engineering Div., Allied Chemical & Dye Corp., New York, N. Y.
Stewart Ice Machine Co., Pomona, Calif.
Union Steam Pump Co., Battle Creek, Mich.
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Wittenmeier Machinery Co., Chicago, Ill.
Worthington Corp., Harrison, N. J.
X L Refrigerating Co., Chicago, Ill.
York Corp., York, Pa.

CONDENSING UNITS, REFRIGERATING

Open

Airtemp Div., Chrysler Corp., Dayton, Ohio.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Frick Co., Waynesboro, Pa.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
Howe Ice Machine Co., Chicago, Ill.
Kelvinator Div., Nash-Kelvinator Corp., Detroit, Mich.
Schnacke, Inc., Evansville, Ind.
Tecumseh Products Co., Tecumseh, Mich.
Trane Co., LaCrosse, Wis.
Vilter Mfg. Co., Milwaukee, Wis.
Worthington Corp., Harrison, N. J.

Yates-American Machine Co., Beloit, Wis.
York Corp., York, Pa.

Sealed

Airtemp Div., Chrysler Corp., Dayton, Ohio.
Frick Co., Waynesboro, Pa.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
Kelvinator Div., Nash-Kelvinator Corp., Detroit, Mich.
Servel, Inc., Electric Refrig. Div., Evansville, Ind.
Tecumseh Products Co., Tecumseh, Mich.
Westinghouse Elec., Corp., Sturtevant Div., Boston, Mass.
Worthington Corp., Harrison, N. J.
York Corp., York, Pa.

CONDUCTOR PIPE AND FITTINGS

See Pipe, Conductor; Fittings and Accessories, Conductor

CONNECTORS, DUCT, FLEXIBLE

American Ventilating Hose Co., New York, N. Y.
Bauer & Black Div. Kendall Co., Chicago, Ill. (Polyken industrial tape)
Corbman Bros., Inc., Philadelphia, Pa.
Felters Co., Inc., Boston, Mass. (Felt)
Flexible Tubing Corp., Guilford, Conn. (Coated Fabric)
Flexonics Corp., Maywood, Ill.
Iden Associates, Chicago, Ill.
St. Clair Rubber Co., Marysville, Mich. (Fiberglas)
United States Rubber Co., New York, N. Y.
Wagner Awning & Mfg. Co., Cleveland, Ohio.
Wilson, Inc., Grant, Chicago, Ill. (Asbestos).
Wiremold Co., Hartford, Conn.

CONNECTORS, METAL, FOR METAL DUCTS

Acme Mfg. Co., Philadelphia, Pa.
Carolina Blowers Co., Inc., Greensboro, N. C.
Corbman Bros., Inc., Philadelphia, Pa.
Inland Steel Products Co., Milwaukee, Wis.
International Heater Co., Utica, N. Y.

CONTROLS

Blower, Speed Changing

Carvell Heat Equipment Co., Los Angeles, Calif.
Vol-U-Trol Co., St. Paul, Minn.
Webster Electric Co., Racine, Wis. (Thermal).
White Mfg. Co., St. Paul, Minn.

Combination Fan and Limit, Line or Low Voltage

Automatic Devices Co., Inc., Western Springs, Ill.
Cam-Stat Inc., Div. Paul Henry Co., Los Angeles, Calif.
Cook Electric Co., Chicago, Ill.
Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Defender Instrument & Regulator Co., St. Louis, Mo.
Detroit Controls Corp., Detroit, Mich.
Ess Instrument Co., Bergenfield, N. J.
General Controls Co., Glendale, Calif.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Standard Remote Control Valve Co., South Pasadena, Calif.
Therm-O-Disc, Inc., Mansfield, Ohio.
White Mfg. Co., St. Paul, Minn.
White-Rodgers Electric Co., St. Louis, Mo.

Combustion, Line or Low Voltage

Barber-Colman Co., Rockford, Ill.
Bristol Co., Waterbury, Conn.
Combustion Control Corp., Cambridge, Mass.
Crown Controls Co., Inc., New Bremen, Ohio.
Eclipse Fuel Engineering Co., Rockford, Ill.
Electronic Products Co., St. Charles, Ill. (Industrial)
General Controls Co., Glendale, Calif.
Hays Corp., Michigan City, Ind.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Shallcross Controls, Inc., Milwaukee, Wis.
White-Rodgers Electric Co., St. Louis, Mo.

Fan

Allen-Bradley Co., Milwaukee, Wis.
Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
Automatic Devices Co., Inc., Western Springs, Ill.
Barber-Colman Co., Rockford, Ill.
Cam-Stat, Inc., Div. Paul Henry Co., Los Angeles, Calif.
Clark Controller Co., Cleveland, Ohio.
Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Detroit Controls Corp., Detroit, Mich.
General Controls Co., Glendale, Calif.
Iron Fireman Mfg. Co., Cleveland, Ohio.
McCorkle Co., D. H., Berkeley, Calif.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis
Sampsel Time Control, Inc., Spring Valley, Ill.
Spencer Thermostat Div. Metals & Controls Corp., Attleboro, Mass.
Therm-O-Disc, Inc., Mansfield, Ohio.
United Electric Controls Co., South Boston, Mass.
White Mfg. Co., St. Paul, Minn. (Low).
White-Rodgers Electric Co., St. Louis, Mo.

Humidistats

Au-Temp-Co Corp., New York, N. Y.
Barber-Colman Co., Rockford, Ill.
General Controls Co., Glendale, Calif.
H-B Instrument Co., Inc., Philadelphia, Pa.
Johnson Service Co., Milwaukee, Wis.
Maid-O'-Mist, Inc., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Taylor Instrument Companies, Rochester, N. Y.

Limit, Line or Low Voltage

Allen-Bradley Co., Milwaukee, Wis. (Low).
Au-Temp-Co Corp., New York, N. Y.
Automatic Devices Co., Inc., Western Springs, Ill.
Barber-Colman Co., Rockford, Ill.
Cam-Stat Inc., Div. Paul Henry Co., Los Angeles, Calif.
Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Crown Controls Co., Inc., New Bremen, Ohio. (Low)
Detroit Controls Corp., Detroit, Mich.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Iron Fireman Mfg. Co., Cleveland, Ohio.
McCorkle Co., D. H., Berkeley, Calif.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Sampsel Time Control, Inc., Spring Valley, Ill.
Spencer Thermostat Div. Metals & Controls Corp., Attleboro, Mass.
Therm-O-Disc, Inc., Mansfield, Ohio.
United Electric Controls Co., South Boston, Mass.
Weston Electrical Instruments Corp., Newark, N. J.
White Mfg. Co., St. Paul, Minn.
White-Rodgers Electric Co., St. Louis, Mo.

Motors, Duct Damper, Modulating or Proportioning

Automatic Temperature Control Co., Inc., Philadelphia, Pa.
Barber-Colman Co., Rockford, Ill.
Bristol Co., Waterbury, Conn.
General Blower Co., Inc., Philadelphia, Pa.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Motors, Duct Damper, Two Position

A-P Controls Corp., Milwaukee, Wis.
Au-Temp-Co Corp., New York, N. Y.
Automatic Temperature Control Co., Inc., Philadelphia, Pa.
Barber-Colman Co., Rockford, Ill.
Bristol Co., Waterbury, Conn.
Crise Controls, Div. Acro Mfg. Co., Columbus, Ohio.
Crown Controls Co., Inc., New Bremen, Ohio.
General Blower Co. Inc., Philadelphia, Pa.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
White Mfg. Co., St. Paul, Minn.

Motors, Draft Damper, Electrical

A-P Controls Corp., Milwaukee, Wis.
Au-Temp-Co Corp., New York, N. Y.
Automatic Temperature Control Co., Inc., Philadelphia, Pa.
Barber-Colman Co., Rockford, Ill.
Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Crown Controls Co., Inc., New Bremen, Ohio.
Defender Instrument & Regulator Co., St. Louis, Mo.
General Blower Co. Inc., Philadelphia, Pa.
Kol-Master Corp., Oregon, Ill.
Mercoid Corp., Chicago, Ill.

Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Square D Co., Detroit, Mich.
White Mfg. Co., St. Paul, Minn.
White-Rodgers Electric Co., St. Louis, Mo.

Pilots, Gas Burner

Ajax Thermostatic Controls Co., Gates Mills, Ohio.
American Control Co., Compton, Calif.
A-P Controls Corp., Milwaukee, Wis.
Cleveland Heater Co., Cleveland, Ohio.
Continental Instrument Co., Cleveland, Ohio.
Eclipse Fuel Engineering Co., Rockford, Ill.
Electronic Products Co., St. Charles, Ill.
General Controls Co., Glendale, Calif.
Grayson-Greenamyer, Inc., Monrovia, Calif.
Kathe Controls, Cleveland, Ohio.
Mercoid Corp., Chicago, Ill.
Milwaukee Gas Specialty Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Modern Materials, Inc., Northville, Mich.
Newell & Sons, Irwin, Pa.
Patrol Valve Co., Cleveland, Ohio. (Also gas pilot filters)
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Roberts-Gordon Appliance Corp., Buffalo, N. Y.
Robertshaw Thermostat Div. Robertshaw-Fulton Controls Co., Youngwood, Pa.
Standard Remote Control Valve Co., Inc., South Pasadena, Calif.
Therm-O-Disc, Inc., Mansfield, Ohio.
Titan Valve & Mfg. Co., Cleveland, Ohio.
White-Rodgers Electric Co., St. Louis, Mo.
Zink Co., John, Tulsa, Okla.

Pressure, Refrigerating

Automatic Control Co., St. Paul, Minn.
Barksdale Valves, Los Angeles, Calif.
Cook Electric Co., Chicago, Ill.
Giannini & Co., Inc., G. M., Pasadena, Calif.
Henry G. Dietz Co., Long Island City, N. Y.
McQuay-Norris Mfg. Co., St. Louis, Mo.
Mercoid Corp., Chicago, Ill.
Newark Boiler Regulator Co., Inc., Bloomfield, N. J.
Penn Controls, Inc., Goshen, Ind.
Ranco, Inc., Columbus, Ohio.
Shallcross Controls, Inc., Milwaukee, Wis.
Soreng Mfg. Co., Schiller Park, Ill.
Square D Co., Industrial Controller Div., Milwaukee, Wis.
Thermix Corp., The, Greenwich, Conn.

Relays, Electrical

Allen-Bradley Co., Milwaukee, Wis.
American Instrument Co., Inc., Silver Spring, Md.
Arrow-Hart & Hageman Electric Co., Hartford, Conn.
Au-Temp-Co Corp., New York, N. Y.
Automatic Electric Mfg. Co., Mankato, Minn.
Automatic Switch Co., Orange, N. J.
Automatic Temperature Control Co., Inc., Philadelphia, Pa.
B/W Controller Corp., Birmingham, Mich.
Barber-Colman Co., Rockford, Ill.
Benjamin Electric Mfg. Co., Des Plaines, Ill.
Burke Engineering Co., Los Angeles, Calif.
Clark Controller Co., Cleveland, Ohio.
Cooper Co., Clark, Palmyra, N. J.
Cramer Co., Inc., R. W., Centerbrook, Conn. (Time)
Cutler-Hammer, Inc., Milwaukee, Wis.
Detroit Controls Corp., Detroit, Mich.
Electronic Products Co., St. Charles, Ill. (Photo-electric)
Ess Instrument Co., Bergenfield, N. J.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Guardian Electric Mfg. Co., Chicago, Ill.
Hart Mfg. Co., Hartford, Conn.
H-B Instrument Co., Philadelphia, Pa.
Industrial Engineering Corp., Terre Haute, Ind.
Iron Fireman Mfg. Co., Cleveland, Ohio.
McCorkle Co., D. H., Berkeley, Calif.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Monitor Controller Co., Boston, Mass.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Philadelphia Thermometer Co., Philadelphia, Pa.
Photoswitch, Inc., Cambridge, Mass.
Precision Thermometer & Instrument Co., Philadelphia, Pa.
Reynolds Electric Co., River Grove, Ill.
Soreng Mfg. Co., Schiller Park, Ill.
Square D Co., Detroit, Mich.
Square D Co., Industrial Controller Div., Milwaukee, Wis.
Ward Leonard Electric Co., Mt. Vernon, N. Y.
Westinghouse Electric Corp., Pittsburgh, Pa.
Weston Electrical Instrument Corp., Newark, N. J.
White-Rodgers Electric Co., St. Louis, Mo.
Zenith Electric Co., Chicago, Ill.

Switches, Magnetic

Allen-Bradley Co., Milwaukee, Wis.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
Automatic Electric Mfg. Co., Mankato, Minn.
Automatic Switch Co., Orange, N. J.
B/W Controller Corp., Birmingham, Mich.
Barber-Colman Co., Rockford, Ill.
Clark Controller Co., Cleveland, Ohio.
Cutler-Hammer, Inc., Milwaukee, Wis.
Detroit Controls Corp., Detroit, Mich.
Electric Controller & Mfg. Co., Cleveland, Ohio.
Furnas Electric Co., Batavia, Ill.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Guardian Electric Mfg. Co., Chicago, Ill.
H-B Instrument Co., Philadelphia, Pa.
Hart Mfg. Co., Hartford, Conn. (Mercury Tube).
Industrial Engineering Corp., Terre Haute, Ind.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Monitor Controller Co., Boston, Mass.
Palmer Electric Co., Chicago, Ill.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Soreng Mfg. Co., Schiller Park, Ill.
Square D Co., Detroit, Mich
Square D Co., Indus. Controller Div., Milwaukee, Wis.
Tork Clock Co., Inc., Mt. Vernon, N. Y.
Ward Leonard Electric Co., Mt. Vernon, N. Y.
Westinghouse Electric Corp., Pittsburgh, Pa.
White-Rodgers Electric Co., St. Louis, Mo.
Zenith Electric Co., Chicago, Ill.

Switches, Manual

Allen-Bradley Co., Milwaukee, Wis.
Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
Barber-Colman Co., Rockford, Ill.
Burke Engineering Co., Los Angeles, Calif.
Clark Controller Co., Cleveland, Ohio.
Cutler-Hammer, Inc., Milwaukee, Wis.
Dual Remote Control Co., Garden City, Mich.
Furnas Electric Co., Batavia, Ill.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Hart Mfg. Co., Hartford, Conn.
Industrial Engineering Corp., Terre Haute, Ind.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Soreng Mfg. Co., Schiller Park, Ill.
Square D Co., Detroit, Mich
Square D Co., Indus. Controller Div., Milwaukee, Wis.
Ward Leonard Electric Co., Mount Vernon, N. Y.
Westinghouse Electric Corp., Pittsburgh, Pa.

Switches, Time

Allen-Bradley Co., Milwaukee, Wis.
Au-Temp-Co Corp., New York, N. Y.
Automatic Controls Corp., Ann Arbor, Mich.
Automatic Devices Co., Inc., Western Springs, Ill.
Automatic Electric Mfg. Co., Mankato, Minn.
Automatic Switch Co., Orange, N. J.
Automatic Temperature Control Co., Inc., Philadelphia, Pa.
Barber-Colman Co., Rockford, Ill.
Clark Controller Co., Cleveland, Ohio.
Cooper Co., Clark, Palmyra, N. J.
Cramer Co., Inc., The R. W., Centerbrook, Conn.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Industrial Engineering Corp., Terre Haute, Ind.
International Register Co., Chicago, Ill.
Landis & Gyr, Inc., New York, N. Y.
Mercoid Corp., Chicago, Ill.
Miller-Harris Instrument Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Palo-Myers, Inc., New York, N. Y.
Perfex Corp., Milwaukee, Wis.
Photoswitch, Inc., Cambridge, Mass.
R. B. Enterprises, Inc., Detroit, Mich.
Reliance Automatic Lighting Co., Racine, Wis.

Reynolds Electric Co., River Grove, Ill.
Rhodes, Inc., M. H., Hartford, Conn.
Sangamo Electric Co., Springfield, Ill.
Telechron, Inc., Ashland, Mass.
Tork Clock Co., Inc., Mt. Vernon, N. Y.
Ward Leonard Electric Co., Mt. Vernon, N. Y.
Westinghouse Electric Corp., Pittsburgh, Pa.
White-Rodgers Electric Co., St. Louis, Mo.
Zenith Electric Co., Chicago, Ill.

Thermostats, Clock, Day and Night

Barber-Colman Co., Rockford, Ill.
Crown Controls Co., Inc., New Bremen, Ohio.
Detroit Controls Corp., Detroit, Mich.
General Controls Co., Glendale, Calif.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Mercoid Corp., Chicago, Ill.
Miller-Harris Instrument Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Paragon Elec. Co., Two Rivers, Wis.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Sampsel Time Control, Inc., Spring Valley, Ill.
Sarcotherm Controls, Inc., New York, N. Y.
Tork Clock Co., Inc., Mt. Vernon, N. Y.
White-Rodgers Electric Co., St. Louis, Mo.

Thermostats, Domestic Water Heater

A-P Controls Corp., Milwaukee, Wis.
Ajax Thermostatic Controls Co., Gates Mills, Ohio.
American Control Co., Compton, Calif.
American Instrument Co., Inc., Silver Spring, Md.
Cam-Stat Inc., Div. Paul Henry Co., Los Angeles, Calif.
Cleveland Heater Co., Cleveland, Ohio.
Cutler-Hammer, Inc., Milwaukee, Wis.
General Controls Co., Glendale, Calif.
Hart Mfg. Co., Hartford, Conn.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Perfex Corp., Milwaukee, Wis.
Robertshaw Thermostat Div., Robertshaw-Fulton Controls Co., Youngwood, Pa.
Therm-O-Disc, Inc., Mansfield, Ohio.
Titan Valve & Mfg. Co., Cleveland, Ohio.
Westinghouse Electric Corp., Pittsburgh, Pa.

Thermostats, Heat Accelerated or Anticipating

A-P Controls Corp., Milwaukee, Wis.
Au-Temp-Co Corp., New York, N. Y.
Barber-Colman Co., Rockford, Ill.
Cooper Co., Clark, Palmyra, N. J.
Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Crown Controls Co., Inc., New Bremen, Ohio.
Detroit Controls Corp., Detroit, Mich.
Fulton Sylphon Div. Robertshaw-Fulton Controls Co., Knoxville, Tenn.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
General Controls Co., Glendale, Calif.
H-B Instrument Co., Philadelphia, Pa.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Sarcotherm Controls, Inc., New York, N. Y.
White-Rodgers Electric Co., St. Louis, Mo.

Thermostats, Line or Low Voltage

American Instrument Co., Inc., Silver Spring, Md.
A-P Controls Corp., Milwaukee, Wis.
Au-Temp-Co Corp., New York, N. Y.
Barber-Colman Co., Rockford, Ill.
Cam-Stat Inc., Div. Paul Henry Co., Los Angeles, Calif.
Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Crown Controls Co., Inc., New Bremen, Ohio.
Detroit Controls Corp., Detroit, Mich.
General Controls Co., Glendale, Calif.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
H-B Instrument Co., Philadelphia, Pa.
Iron Fireman Mfg. Co., Cleveland, Ohio.
McCorkle Co., D. H., Berkeley, Calif.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Robertshaw Thermostat Div., Robertshaw-Fulton Controls Co., Youngwood, Pa.
Sampsel Time Control, Inc., Spring Valley, Ill.
Sarcotherm Controls, Inc., New York, N. Y.
Spencer Thermostat Div. Metals & Controls Corp., Attleboro, Mass.
Standard Remote Control Valve Co., South Pasadena, Calif.
United Electric Controls Co., South Boston, Mass.
White Mfg. Co., St. Paul, Minn.
White-Rodgers Electric Co., St. Louis, Mo.

Thermostats, Modulating or Proportioning

A-P Controls Corp., Milwaukee, Wis.
Atlas Valve Co., Newark, N. J. (Pneumatic)
Automatic Devices Co., Inc., Western Springs, Ill.
Barber-Colman Co., Rockford, Ill.
Defender Instrument & Regulator Co., St. Louis, Mo.
Johnson Service Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Superior Controls Co., Inc., Los Angeles, Calif.
White Mfg. Co., St. Paul, Minn.
White-Rodgers Electric Co., St. Louis, Mo.

Thermostats, Weather Compensating

Automatic Devices Co., Inc., Weather Controls Div., Western Springs, Ill.
Barber-Colman Co., Rockford, Ill.
Detroit Controls Corp., Detroit, Mich.
Heat-Timer Corp., New York, N. Y.
Illinois Engineering Co., Chicago, Ill.
Johnson Service Co., Milwaukee, Wis.
McLarty Systems, Battle Creek, Mich.
Miller Heat-O-Meter Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Sarcotherm Controls, Inc., New York, N. Y.
United Electric Controls Co., South Boston, Mass.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROL SYSTEMS

Flame Failure

American District Telegraph Co., New York, N. Y.
Bristol Co., The, Waterbury, Conn.
Canton Stoker Corp., Canton, Ohio.
Combustion Control Corp., Cambridge, Mass.
De-Tec-Tronic Laboratories, Inc., Chicago, Ill.
Drying Systems, Inc., Chicago, Ill.
Eclipse Fuel Engineering Co., Rockford, Ill.
Electronic Products Co., St. Charles, Ill.
Ess Instrument Co., Bergenfield, N. J.
Fuelguard Co., Dallas, Texas.
Haney Gas Burner & Engrs., Monrovia, Calif.
Mettler Co., Inc., The, Los Angeles, Calif.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Gas Burner, Complete Assembly

A-P Controls Corp., Milwaukee, Wis.
Detroit Controls Corp., Detroit, Mich.
Eclipse Fuel Engineering Co., Rockford, Ill.
General Controls Co., Glendale, Calif.
Hays Corp., Michigan City, Ind.
Mettler Co., Inc., The, Los Angeles, Calif.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Mueller Furnace Co., L. J., Milwaukee, Wis. (Modulating)
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
R. B. Enterprises, Inc., Detroit, Mich.
White-Rodgers Electric Co., St. Louis, Mo.

Gravity Furnace, Hand-Fired, Complete Assembly

A-P Controls Corp., Milwaukee, Wis.
Barber-Colman Co., Rockford, Ill.
Bearlee Products Co., Green Bay, Wis.
Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Crown Controls Co., New Bremen, Ohio.
Defender Instrument & Regulator Co., St. Louis, Mo.
General Controls Co., Glendale, Calif.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Sampsel Time Control, Inc., Spring Valley, Ill.
White Mfg. Co., St. Paul, Minn.
White-Rodgers Electric Co., St. Louis, Mo.

Heating, Ventilating, and Air Conditioning Systems, Electrical

Barber-Colman Co., Rockford, Ill.
Burke Engineering Co., Los Angeles, Calif.
Clark Controller Co., Cleveland, Ohio.
Ess Instrument Co., Bergenfield, N. J.

General Controls Co., Glendale, Calif.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Mercoid Corp., Chicago, Ill.
Midwest Automatic Control Co., Des Moines, Iowa.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
White-Rodgers Electric Co., St. Louis, Mo.

Oil Burner, Complete Assembly

A-P Controls Corp., Milwaukee, Wis.
Defender Instrument & Regulator Co., St. Louis, Mo.
Detroit Controls Corp., Detroit, Mich.
Electronic Products Co., St. Charles, Ill.
Ess Instrument Co., Bergenfield, N. J.
General Controls Co., Glendale, Calif.
Hays Corp., Michigan City, Ind.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Shallcross Controls Inc., Milwaukee, Wis.
Wheelco Instruments Div., Barber-Coleman Co., Rockford, Ill.
White-Rodgers Electric Co., St. Louis, Mo.

Stoker, Complete Assembly

Defender Instrument & Regulator Co., St. Louis, Mo.
Hays Corp., Michigan City, Ind.
Iron Fireman Mfg. Co., Cleveland, Ohio
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Palmer Electric Co., Chicago, Ill.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Shallcross Controls Co., Inc., Milwaukee, Wis.
White-Rodgers Electric Co., St. Louis, Mo.

Winter Air Conditioning Furnace, Hand Fired, Complete Assembly

Barber-Colman Co., Rockford, Ill.
Crown Controls Co., Inc., New Bremen, Ohio.
General Controls Co., Glendale, Calif.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
White Mfg. Co., St. Paul, Minn.
White-Rodgers Electric Co., St. Louis, Mo.

Zone, Complete Assembly

Au-Temp-Co Corp., New York, N. Y.
Barber-Colman Co., Rockford, Ill.
Burke Engineering Co., Los Angeles, Calif.
Crise Controls Div., Acro Mfg. Co., Columbus, Ohio.
Dole Valve Co., Chicago, Ill.
General Controls Co., Glendale, Calif.
Johnson Service Co., Milwaukee, Wis.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.

COOLING COILS

See Coils, Cooling

COPPER PIPE

See Tubing, Copper

COPPER SHEETS

See Sheets, Metal, Copper

COPPER TUBE FITTINGS

See Fittings, Copper Tube

COPPERS, SOLDERING

Acme Electric Heating Co., Inc., Boston, Mass. (Electric)
American Electric Heater Co., Detroit, Mich.
Bomas Mfg. Co., Binghamton, N. Y.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Dual Remote Control Co., Garden City, Mich. (Electric)
Electric Soldering Iron Co., Inc., Deep River, Conn. (Electric)
Everhot Mfg. Co., Maywood, Ill.
General Electric Co., Schenectady, N. Y. (Electric)
Hexacon Electric Co., Roselle Park, N. J. (Electric)
Hussey & Co., C. G., Pittsburgh, Pa.
Ideal Industries, Inc., Sycamore, Ill.
Imperial Brass Mfg. Co., Chicago, Ill. (Air-acetylene)
Insto-Gas Corp., Detroit, Mich. (Gas)
Kemode Mfg. Co., New York, N. Y. (Cartridge heated)
Kwikheat Mfg. Co., Glendale, Calif. (Electric)
Linde Air Products Co., New York, N. Y.
Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.
Minn-Kota Foundry & Mfg. Co., Fargo, N. Dak.
Nelpin Mfg. Co., Long Island City, N. Y. (Feeding attachment)
Ransome Co., Emeryville, Calif. (Gas)
Reiner & Campbell Co., Inc., Newark, N. J.
Sight Feed Generator Co., West Alexandria, Ohio.
Stanley Tools, New Britain, Conn.
Torit Mfg. Co., St. Paul, Minn.
Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., Danvers, Mass. (Electric)
Weiss & Co., H., New York, N. Y.

CRANES, OVERHEAD TRAVELING, HAND AND POWER

American MonoRail Co., Cleveland, Ohio.
Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
Chicago Tramrail Co., Chicago, Ill.
Chisholm-Moore Hoist Corp., Div. Columbus McKinnon Chain Corp., Tonawanda, N. Y.
Cleveland Crane & Engineering Co., Wickliffe, Ohio.
Detroit Hoist & Machine Co., Detroit, Mich.
Euclid Crane & Hoist Co., Euclid, Ohio.
Harnischfeger Corp., Milwaukee, Wis. (Electric)
Louden Machinery Co., Fairfield, Iowa.
Reading Chain & Block Corp., Reading, Pa.
Richards-Wilcox Mfg. Co., Aurora, Ill.
Robbins & Myers, Inc., Springfield, Ohio.
Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.
Webb Co., Jervis B., Detroit, Mich.
Whiting Corp., Harvey, Ill
Wright Hoist Div., American Chain & Cable Co., York, Pa.

CRIMPING MACHINES

See Machines, Crimping

DAMPER, DUCT, REGULATOR SETS

See Regulators, Duct Damper Sets

DAMPER MOTORS

See Controls, Motors

DAMPERS, BACK DRAFT

See Louvers and Shutters

DAMPERS

Draft, Barometric

Atlas Valve Co., Newark, N. J.
Barber-Colman Co., Rockford, Ill.
Bearlee Products Co., Green Bay, Wis.
Boston Machine Works Co., Lynn, Mass.
Breese Burners, Inc., Santa Fe, N. Mex.
Cole-Sewell Engineering Co., St. Paul, Minn.
Combustion Equipment Co., Rock Island, Ill.
Empire Ventilation Equipment Co., Long Island City, N. Y.
Field Control Div., H. D. Conkey & Co., Mendota, Ill.
Herd Utilities, Inc., Providence, R. I. (Thermostatic)
Hotstream Heater Co., Cleveland, Ohio
James Regulator Co., Inc., Hamburg, Pa.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
Juniper Elbow Co., Inc., Middle Village, L. I., N. Y.
Krueger Sentry Gauge Co., Green Bay, Wis.
Lifetime Mfg. Co., Pemberville, Ohio.
National Fuel Conservation Co., Inc., White Plains, N. Y.
Perfex Corp., Milwaukee, Wis.
Preferred Utilities Mfg. Corp., New York, N. Y
Quickdraft Co., Div. Hall's Safe Co., Inc., Canton, Ohio.
Shallcross Controls, Inc., Milwaukee, Wis.
Simplex Mfg. Co., Fond du Lac, Wis.
Walker Mfg. & Sales Corp., St. Joseph, Mo.
Windmaster, Inc., Columbus, Ohio.

Smoke Pipe

Adams Co., Dubuque, Iowa.
Buckeye Furnace Pipe Co. Columbus, Ohio.
Char-Gale Mfg. Co., Minneapolis, Minn.
Corbman Bros., Inc., Philadelphia, Pa.
Eselgroth & Co., Newark, N. J.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Griswold Mfg. Co., Erie, Pa.
Hotstream Heater Co., Cleveland, Ohio.
Howes-Woods Co., Cambridge, Mass.
J & J Sheet Metal Co., Van Dyke, Mich.
Keith Furnace Co., Des Moines, Iowa.

Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co, Marshall, Mich.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Peacard Co., M. A., Boston, Mass.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Preferred Utilities Mfg. Corp., New York, N. Y.
Quickdraft Co., Div. Hall's Safe Co., Inc., Canton, Ohio.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
United States Register Co., Battle Creek, Mich.
Walker Mfg. & Sales Corp., St. Joseph, Mo.
Wheeling Corrugating Co., Wheeling, W. Va.
Williamson Heater Co., Cincinnati, Ohio.

Stack Head

Acme Furnace Fitting Co., Chicago, Ill.
Acme Mfg. Co., Philadelphia, Pa.
Aircflo Furnace Pipe Co., Van Dyke, Mich.
Air Control Products, Inc., Coopersville, Mich.
Barber-Colman Co., Rockford, Ill.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Corbman Bros., Inc., Philadelphia, Pa.
Excelsior Steel Furnace Co., Chicago, Ill.
Henry Furnace Co., Medina, Ohio.
Inland Steel Products Co., Milwaukee, Wis.
J & J Sheet Metal Co., Van Dyke, Mich.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Peacard Co., M. A., Boston, Mass.
Truscon Steel Co., Youngstown, Ohio.

Warm Air Pipe

Acme Furnace Fitting Co., Chicago, Ill.
Acme Mfg. Co., Philadelphia, Pa.
Aireflo Furnace Pipe Co., Van Dyke, Mich.
Adams Co., Dubuque, Iowa.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Char-Gale Mfg. Co., Minneapolis, Minn.
Corbman Bros., Inc., Philadelphia, Pa.
Excelsior Steel Furnace Co., Chicago, Ill.
Hart & Cooley Mfg. Co., Holland, Mich.
Inland Steel Products Co., Milwaukee, Wis.
J & J Sheet Metal Co., Van Dyke, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Marshall Furnace Co., Marshall, Mich.
Peacard Co., M. A., Boston, Mass.
Peerless Foundry Co., Indianapolis, Ind.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Ralph Mfg. Co., Inc., Wadsworth, Ohio.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Thor Metal Products Co., Inc., Syracuse, N. Y.
United States Register Co., Battle Creek, Mich.
Wheeling Corrugating Co., Wheeling, W. Va.
Williamson Heater Co., Cincinnati, Ohio.
Young Regulator Co., Cleveland, Ohio.

DEHUMIDIFIERS, ABSORPTION AND ADSORPTION

Air Conditioning Engineering Co., Cambridge, Mass.
Air and Refrigeration Corp., New York, N. Y.
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio. (Adsorption)
Carbide and Carbon Chemicals Co., Div. Union Carbide & Chemical Corp., New York, N. Y. (Triethylene glycol)
Cargocaire Engineering Corp., New York, N. Y.
Carrier Corp., Syracuse, N. Y.
Daly, Merritt & Sullivan, Inc., Falls Church, Va.
Davison Chemical Corp., Baltimore, Md.
Floridin Co., Warren, Pa.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kaufman Co., H. I., Detroit, Mich. (Absorption)
Lonergan Mfg. Co., Albion, Mich.
Pittsburgh Lectrodryer Corp., Pittsburgh, Pa.
Rodgers Diesel & Air Craft Corp., New York, N. Y.
Solvay Process Div., Allied Chemical & Dye Corp., New York, N. Y.
Surface Combustion Corp., Toledo, Ohio.
Tamms Industries Inc., Chicago, Ill.
Universal Blower Co., Birmingham, Mich.
York Corp., York, Pa.

DEHUMIDIFIERS, ELECTRIC PLUG-IN, FOR SMALL SPACES

Cargocaire Engineering Corp., New York, N. Y.
Ebco Mfg. Co., Columbus, Ohio.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Fedders-Quigan Corp., Buffalo, N. Y.
Haertel Co., Walter, Minneapolis, Minn.
Kauffman Air Conditioning Co., St. Louis, Mo.
Lonergan Mfg. Co., Albion, Mich.
Mitchell Mfg. Co., Chicago, Ill.
Remington Air Conditioning Div., Remington Corp., Auburn, N. Y.
Viking Air Conditioning Corp., Cleveland, Ohio.
Walton Laboratories, Inc., Irvington, N. J.
Westinghouse Elec. Corp., Elec. Appliance Div., East Springfield, Mass.

DEHYDRATORS, REFRIGERANT

Aminco Refrigeration Products Co., Detroit, Mich.
Cee-Kleer Products Co., Cincinnati, O.
Eagle Chemical Co., Inc., Joliet, Ill.
Henry Valve Co., Melrose Park, Ill.
Imperial Brass Mfg. Co., Chicago, Ill.
McIntire Connector Co., Newark, N. J.
Mueller Brass Co., Port Huron, Mich.
Remco, Inc., Zelienople, Pa.
Selas Corp. of America, Philadelphia, Pa.
Superior Valve and Fittings Co., Pittsburgh, Pa.
Techniflex Corp., Port Jervis, N. Y.
Wabash Mfg. Co., Chicago, Ill.

DETECTORS, LEAK, REFRIGERANT

Gates & Co., Inc., George W., Franklin Sq., L. I., N. Y.
Highside Chemicals Co., Clifton, N. J.
Justrite Mfg. Co., Chicago, Ill.
Vacuum-Electronic Engineering Co., New Hyde Park, N. Y.
Velocity-Power Tool Co., Pittsburgh, Pa.

DIES

See Machines, Sheet Metal Working, Presses (and Dies)

DIFFUSERS, AIR, CEILING

A & A Register Co., Cleveland, Ohio.
Air Control Products, Inc., Coopersville, Mich.
Air Devices, Inc., New York, N. Y.
Airfan Engineering Co., Los Angeles, Calif.
Aladdin Heating Corp., Oakland, Calif.
Anemostat Corp. of America, New York, N. Y.
Barber-Colman Co., Rockford, Ill.
Carnes Co., W. R., Verona, Wis.
Connor Engineering Corp., W. B., Danbury, Conn.
Demuth & Sons, Inc., Charles, Mineola, L. I., N. Y.
Hart & Cooley Mfg. Co., Holland, Mich.
Krueger Air Conditioning Co., Tucson, Ariz.
Lima Register Co., Lima, Ohio.
Pyle-National Co., Multi-Vent Div., Chicago, Ill. (Low velocity discharge)
Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Titus, Inc., Waterloo, Iowa.
Titus Mfg. Corp., Waterloo, Iowa.
Trane Co., LaCrosse, Wis.
Tuttle & Bailey, Inc., New Britain, Conn.
Universal Diffuser Corp., New York, N. Y.
U. S. Register Co., Battle Creek, Mich.
Wilster, Inc., Cleveland, Ohio.

DOWNSPOUTING AND FITTINGS

See Pipe, Conductor; Fittings and Accessories, Conductor

DRAFT DIVERTERS, GAS HEATER

Acme Mfg. Co., Philadelphia, Pa.
Adelta Mfg. Co., Inc., Philadelphia, Pa.
Banner Burner Co., Youngstown, Ohio.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Cleveland Heater Co., Cleveland, Ohio.
Cramer Mfg. Co., Canton, Ohio. (Horizontal)
Excelsior Steel Furnace Co., Chicago, Ill.
Famous Furnace Co., Cleveland, Ohio.
Finger, Joe, Cleveland, Ohio. (Hoods)
H&H Research Co., Detroit, Mich. (Electric reciprocating for filing, sawing, scraping, etc.)
Hotstream Heater Co., Cleveland, Ohio.
Inland Steel Products Co., Milwaukee, Wis.
J & J Sheet Metal Co., Van Dyke, Mich.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Maysteel Products, Inc., Milwaukee, Wis.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Sure Comfort Furnace Co., Forest Park, Ill.
Tri-State Heating Supply, Inc., Fort Wayne, Ind.

Waverly Heating Supply Co., Boston, Mass.
Wilder Mfg. Co., Niles, Ohio.
Wilder Products Co., Springfield, Ohio.
Williamson Heater Co., Cincinnati, Ohio.

DRAFT GAUGES

See Gauges, Draft

DRAFT REGULATORS

See Regulators, Furnace Draft, Mechanical; Dampers, Draft, Barometric; Controls

DRILLS, ELECTRIC AND PNEUMATIC, PORTABLE

Air-Speed Tool Co., Los Angeles, Calif. (Pneumatic)
Albertson & Co., Inc., Sioux City, Iowa.
Black & Decker Mfg. Co., Towson, Md. (Electric, Portable)
Buffalo Forge Co., Buffalo, N. Y.
Chicago Pneumatic Tool Co., New York, N. Y.
Clark, Jr., Electric Co., Jas., Louisville, Ky.
DeSoto Oil Burner Co., York, Pa. (Electric)
Independent Pneumatic Tool Co., Aurora, Ill. (Electric & pneumatic)
Ingersoll-Rand Co., New York, N. Y. (Pneumatic)
Keller Tool Co., Grand Haven, Mich. (Pneumatic)
Mall Tool Co., Chicago, Ill. (Electric)
Millers Falls Co., Greenfield, Mass.
Milwaukee Electric Tool Corp., Milwaukee, Wis. (Elec.)
Misener Mfg. Co., Inc., Syracuse, N. Y.
Portable Electric Tools, Inc., Chicago, Ill. (Electric)
Rotor Tool Co., Cleveland, Ohio. (Pneumatic & electric)
Skil Corporation, Chicago, Ill. (Electric & pneumatic)
Small Motors, Inc., Chicago, Ill. (Electric)
Snap-on Tools Corp., Kenosha, Wis.
Speedway Mfg. Co., Cicero, Ill.
Stanley Electric Tool Div., Stanley Works, New Britain, Conn. (Electric)
Stow Mfg. Co., Binghamton, N. Y. (Electric-flexible shaft)
Syntron Co., Homer City, Pa. (Electric)
Tempo Products Co., Cleveland, Ohio. (Powder operated)
Time Saver Tools, Inc., Mundelein, Ill. (Electric)
United States Electrical Tool Co., Cincinnati, Ohio. (Electric)
Wodack Electric Tool Corp., Chicago, Ill. (Electric)
York Electric & Machine Co., York, Pa. (Electric)

DRIVE CLEATS

See Connectors, Metal, for Metal Ducts

DRYERS, FURNACE TYPE

Campbell Heating Co., Des Moines, Iowa.
Jackson & Church Co., Saginaw, Mich.
Link-Belt Co., Chicago, Ill.

DUCT CONNECTORS

See Connectors, Duct, Flexible

DUCT INSULATION

See Insulation, Duct

DUCT TURNING VANES

See Vanes, Duct Turning

DUCTS AND DUCT FITTINGS, PREFABRICATED

Metal

Acer & Whedon, Inc., Medina, N. Y.
Acme Mfg. Co., Philadelphia, Pa.
Adelta Mfg. Co., Inc., Philadelphia, Pa.
Aireflo Furnace Pipe Co., Van Dyke, Mich.
Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
Beckett & Co., Thomas, Dallas, Texas.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Champion Furnace Pipe Co., Peoria, Ill.
Chandler Co., Cedar Rapids, Iowa.
Char-Gale Mfg. Co., Minneapolis, Minn.
Chicago Furnace Supply Co., Chicago, Ill.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Coleman Co., Inc., Wichita, Kans.
Corbman Bros., Inc., Philadelphia, Pa.
Detroit Safety Furnace Pipe Co., Detroit, Mich.
Diamond Mfg. Co., Wyoming, Pa.
Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
Excelsior Steel Furnace Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Flexonics Corp., Chicago, Ill.
Gary Steel Products Co., Gary, Ind.
General Automatic Products Corp., Baltimore, Md.
General Electric Co., Air Cond. Div., Bloomfield, N. J.
Grand Island Furnace & Supply Co., Grand Island, Nebr.
Gray Metal Products, Inc., Rochester, N. Y.
Henry Furnace Co., Medina, Ohio.
Hexdall, A. M., Morris, Ill.
Howes-Woods Co., Cambridge, Mass.
Inland Steel Products Co., Milwaukee, Wis.
International Heater Co., Utica, N. Y.
J & J Sheet Metal Co., Van Dyke, Mich.
Jettronaire, Inc., McKeesport, Pa.
Keith Furnace Co., Des Moines, Iowa.
Krauser-Boyd, Inc., North Tonawanda, N. Y.
Lennox Furnace Co., Marshalltown, Iowa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Made-Rite Co., Inc., Newport, Ky.
Marshall Furnace Co., Marshall, Mich.
Metal Fabricators, Inc., Charlotte, N. C.
Metalmen, Inc., Chicago, Ill.
Meyer & Bro. Co., F., Peoria, Ill.
Moncrief Furnace Co., Atlanta, Ga.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Northwest Metal Products, Inc., Seattle, Wash.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Ohio Valley Hardware & Roofing Co., Evansville, Ind.
Patten Co., J. V., Sycamore, Ill.
Peacard Co., M. A., Boston, Mass.
Peerless Furnace and Foundry, Inc., Indianapolis, Ind.
Perfection Furnace Pipe Co., Toledo, Ohio.
Republic Rubber Div. Lee Rubber & Tire Corp., Youngstown, Ohio. (Rubber)
Round Oak Co., Inc. of Indiana, Dowagiac, Mich.
Schecter Bros. Co., Philadelphia, Pa.
Sioux Steel Co., Sioux Falls, S. D.
Standard Furnace Supply Co., Ltd., Omaha, Nebr.
Superior Safety Furnace Pipe Co., Detroit, Mich.
Thor Metal Products Co., Inc., Syracuse, N. Y.
Tri-State Heating Supply, Inc., Fort Wayne, Ind.
United Industries, Madison, Wis. (Duct hangers for precast concrete joists only)
United States Register Co., Battle Creek, Mich.
Viking Mfg. Corp., Cleveland, Ohio. (Aluminum)
Waterman-Waterbury Co., Minneapolis, Minn.
Waverly Heating Supply Co., Boston, Mass.
Williamson Heater Co., Cincinnati, Ohio.
Youngstown Furnace Co., Youngstown, Ohio.

Non-Metallic

Airfloor of America, Culver City, Calif.
American Agile Corp., Bedford, Ohio. (Plastic)
Brown Co., Boston, Mass. (Wood fiber)
Cannelton Sewer Pipe Co., RadianTile Div., Cannelton, Ind. (clay)
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Coward-Eastman Co., Philadelphia, Pa. (Plastic)
duPont de Nemours & Co., Inc., E. I., Wilmington, Del. (Rubberized tubing).
Flexible Tubing Corp., Guilford, Conn. (Fabric)
Harvey-Whipple, Inc., Springfield, Mass.
Haveg Corp., Newark, Del. (Plastic)
Johns-Manville, New York, N. Y.
Lumm Co., A. H., Toledo, Ohio. (Asbestos cement board)
Price Bros., Flexicore Div., Dayton, Ohio. (Concrete)
Sall Mountain Co., Hamilton, Ohio.
Sonoco Products Co., Hartsville, S.C. (Paper)
United States Rubber Co., New York, N. Y.
Wiremold Co., Hartford, Conn. (Fairprene, Fiberglas)

DUST COLLECTORS

See Collectors, Blow Pipe

EAVES TROUGH AND FITTINGS

See Gutters; Fittings and Accessories, Gutter

ELBOW MACHINES

See Machines, Elbow

ELECTRIC AIR CLEANERS

See Filters, Air, Electrostatic

ELECTRIC MOTORS

See Motors, Electric

ELECTRIC WATER HEATERS

See Heaters, Domestic, Storage Type

ELECTRIC WELDERS

See Welders

ELECTRODES, WELDING

Acme Electric Welder Co., Los Angeles, Calif. (Spot)
Air Reduction Sales Co., New York, N. Y.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allegheny Ludlum Steel Corp., Pittsburgh, Pa. (Stainless steel)
American Agile Corp., Bedford, Ohio.
Arcos Corp., Philadelphia, Pa.
Electric Arc, Inc., Newark, N. J.
Eutectic Welding Alloys Corp., Flushing, N.Y.
General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Bros. Co., Troy, Ohio.
Hollup Corp., Div., National Cylinder Gas Co., Chicago, Ill.
International Nickel Co., Inc., New York, N.Y.
Lincoln Electric Co., Cleveland, Ohio.
McKay Co., Pittsburgh, Pa.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metal & Thermit Corp., New York, N. Y.
National Carbon Co., Inc., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
Page Steel & Wire Div. American Chain & Cable Co., Inc., Monessen, Pa.
Sight Feed Generator Co., West Alexandria, Ohio.
Smith Corp., A. O., Milwaukee, Wis.
Taylor-Winfield Corp., Warren, Ohio.
Trindl Products, Ltd., Chicago, Ill.
Tweco Products Co., Wichita, Kans. (Holders)
Universal Welder Corp., Cleveland, Ohio.
Welding Sales & Engineering Co., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.

EXCHANGERS, HEAT, REFRIGERANT SUCTION LINE

Acme Industries, Inc., Jackson, Mich.
Armstrong Co., Richard M., Westchester, Pa.
Brown Fintube Co., The, Elyria, O.
Davis Engineering Corp., Elizabeth, N. J.
Doyle & Roth Mfg. Co., Brooklyn, N. Y.
Gerstein & Cooper Co., Inc., South Boston, Mass.
Heat-X-Changer Co., Inc., The, Brewster, N. Y.
Mueller Brass Co., Port Huron, Mich.
Superior Valve and Fittings Co., Pittsburgh, Pa.
Techniflex Corp., Port Jervis, N. Y.
Temprite Products Corp., Birmingham, Mich.
Trane Co., LaCrosse, Wis.
Wabash Mfg. Co., Chicago, Ill.

EVAPORATIVE COOLERS

See Air Conditioning Units, Evaporative Type, Summer

EXPANSION BOLTS

See Bolts, Expansion

FACES, COLD AIR

Metal

A & A Register Co., Cleveland , Ohio.
A-J Mfg. Co., Kansas City, Mo.
Air Control Products, Inc., Coopersville, Mich.
American Foundry & Furnace Co., Bloomington, Ill.
Auer Register Co., Cleveland, Ohio.
Barber-Colman Co., Rockford, Ill.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Best Register Co., Milwaukee, Wis.
Char-Gale Mfg. Co., Minneapolis, Minn.
Controlair Mfg. Co., Los Angeles, Calif.
Diamond Mfg. Co., Wyoming, Pa.
Greenberg's Sons, M., San Francisco, Calif.
Hart & Cooley Mfg. Co., Holland, Mich.
Hendrick Mfg. Co., Carbondale, Pa.
Independent Register Co., Cleveland, Ohio.
Juniper Elbow Co., Inc., Middle Village, L. I., N. Y.
Lima Register Co., Lima, Ohio.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Midco Register Corp., St. Paul, Minn.
Mundt & Sons, Charles, Jersey City, N. J.
Peacard Co., M. A., Boston, Mass.
Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Rock Island Register Co., Rock Island, Ill.
Standard Stamping & Perforating Co., Chicago, Ill.
Stewart Mfg. Co., Cedar Grove, N. J.
Tuttle & Bailey, Inc., New Britain, Conn.
United States Register Co., Battle Creek, Mich.

Wood

Marsh Lumber Co., Inc., Dover, Ohio.

FAN CONTROLS

See Controls

FAN-FILTER UNITS, PROPELLER TYPE, WARM AIR FURNACE

Air Controls, Inc., Cleveland, Ohio.
Peerless Electric Co., Warren, Ohio.

FAN HOUSINGS

See Housings, Blower and Fan

FANS, PROPELLER TYPE

Axial Flow

Aerovent Fan Co., Piqua, Ohio.
American Blower Corp., Detroit, Mich.
Ammerman Co., C. L., Minneapolis, Minn.
Bertram Co., Harvey P., Cincinnati, Ohio.
Blower Application Co., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Cook Co., Loren, Berea, Ohio.
Dana Fan & Blower Corp., Cincinnati, Ohio.
De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Filkins, Inc., Edward, Chicago, Ill.
Hartzell Propeller Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
Holden Fan Co., Detroit, Mich.
Ilg Electric Ventilating Co., Chicago, Ill.
International Engineering, Inc., Dayton, Ohio.
Joy Mfg. Co., Pittsburgh, Pa.
Martin Fan & Blower Co., Chicago, Ill.
M & E Mfg. Co., Indianapolis, Ind.
Moore Co., Marceline, Mo.
Robbins & Myers, Inc., Springfield, Ohio.
South Bend Air Products, Inc., South Bend, Ind.
Sprouse Co., Inc., V. E., Columbus, Ind.
Sutton Corp., O. A., Wichita, Kans.
Wind-Way Fan & Ventilator Co., New Orleans, La.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Wing Mfg. Co., L. J., Linden, N.J.

Booster, Cold Air Return

Advance Aluminum Castings Corp., Chicago, Ill.
Bern's Mfg. Co., Chicago, Ill.
Brumme Mfg. Co., Bloomington, Ill.
Cary Mfg. Co., Waupaca, Wis.
Dana Fan & Blower Corp., Cincinnati, Ohio.
General Blower Co., Inc., Philadelphia, Pa.
International Engineering, Inc., Dayton, Ohio.
Joy Mfg. Co., Pittsburgh, Pa.
McLarty Systems, Battle Creek, Mich.
Martin Fan & Blower Co., Chicago, Ill.
Mauer Engineering, Evanston, Ill.
Peerless Electric Co., Warren, Ohio.
Robbins & Myers, Inc., Springfield, Ohio.
Silent Sioux Corp., Orange City, Iowa.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Western Engineering & Mfg. Co., Venice, Calif.

Booster, One-Pipe Warm Air

Brumme Mfg. Co., Bloomington, Ill.
Champion Blower & Forge Co., Lancaster, Pa.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Dual-Air Fan Corp., South Elgin. Ill.
McLarty Systems, Battle Creek, Mich.
Martin Fan & Blower Co., Chicago, Ill.
Mauer Engineering, Evanston, Ill.
Robbins & Myers, Inc., Springfield, Ohio.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Victor Electric Products, Inc., Cincinnati, Ohio.
Western Engineering & Mfg. Co., Venice, Calif.

Exhausters

Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.
Airfan Engineering Co., Los Angeles, Calif.
Ammerman Co., C. L., Minneapolis, Minn.
Babbin, Inc., New York, N. Y. (Mill)
Bertram Co., Harvey P., Cincinnati, Ohio.
Baldor Electric Co., St. Louis, Mo.
Blower Application Co., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
Century Fan & Ventilator Co., Stamford, Conn.

Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N.Y.
Clarage Fan Co., Kalamazoo, Mich.
Cook Co., Loren, Berea, Ohio.
Coppus Engineering Corp., Worcester, Mass.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Day Co., Minneapolis, Minn.
Despatch Oven Co., Minneapolis, Minn.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Filkins, Inc., Edward, Chicago, Ill.
Gallaher Co., Omaha, Nebr.
General Blower Co., Morton Grove, Ill.
Holden Fan Co., Detroit, Mich.
Ilg Electric Ventilating Co., Chicago, Ill.
Jenn Air Products Co., Indianapolis, Ind.
Joy Mfg. Co., Pittsburgh, Pa.
Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Kloppenborg Aluminum Foundry, Davenport, Iowa.
Martin Fan & Blower Co., Chicago, Ill.
Moore Co., Marceline, Mo.
National Engineering & Mfg. Co., Kansas City, Mo.
National Gas Equipment Co., Inc., Terrell, Texas.
Reed Unit-Fans, Inc., New Orleans, La.
Ruemelin Mfg. Co., Milwaukee, Wis.
Signal Electric Mfg. Co., Menominee, Mich.
Torit Mfg. Co., St. Paul, Minn.
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Wind-Way Fan & Ventilator Co., New Orleans, La.

Furnace

Air Controls, Inc., Cleveland, Ohio.
American Blower Corp., Detroit, Mich.
Brumme Mfg. Co., Bloomington, Ill.
Corlett-Turner Co., Chicago, Ill.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Dual-Air Fan Corp., South Elgin, Ill.
Joy Mfg. Co., Pittsburgh, Pa.
Martin Fan & Blower Co., Chicago, Ill.
Meier Electric & Machine Co., Inc., Indianapolis, Ind.
Peerless Electric Co., Warren, Ohio.
Robbins & Myers, Inc., Springfield, Ohio.

Kitchen Exhaust

Airmaster Corp., Chicago, Ill.
American Blower Corp., Detroit, Mich.
Ammerman Co., C. L., Minneapolis, Minn.
Arex Co., Chicago, Ill.
Bar-Brook Mfg. Co., Inc., Shreveport, La.
Bern's Mfg. Co., Chicago, Ill.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Broan Mfg. Co., Inc., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
C & H Air Conditioning Fan Co., Inc., Atlanta, Ga.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Central States Mfg. Co., Inc., Arkansas City, Kans.
Champion Blower & Forge Co., Lancaster, Pa.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Clarage Fan Co., Kalamazoo, Mich.
Commercialaire, Inc., Brooklyn, N. Y.
Crane Co., Chicago, Ill.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Diehl Mfg. Co., Somerville, N. J.
Dual-Air Fan Corp., South Elgin, Ill.
Electrovent Corp., Detroit, Mich.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Emerson Electric Mfg. Co., St. Louis, Mo.
Fasco Industries, Inc., Rochester, N. Y.
Filkins, Inc., Edward, Chicago, Ill.
Gallaher Co., Omaha, Nebr.
General Electric Co., Small Appliance Div., Bridgeport, Conn.
Hunter Fan & Ventilating Co., Memphis, Tenn.
Ilg Electric Ventilating Co., Chicago, Ill.
Jenn Air Products Co., Indianapolis, Ind.
Joy Mfg. Co., Pittsburgh, Pa.
King Co., Owatonna, Minn.
Kloppenborg Aluminum Foundry, Davenport, Iowa.
Kool Air Engineering Co., San Bernardino, Calif.
Lau Blower Co., Dayton, Ohio.
Martin Fan & Blower Co., Chicago, Ill.
Marvin Mfg. Co., Los Angeles, Calif.
Meyer Mfg. Co., Detroit, Mich.
Myers Electric Co., Inc., Pittsburgh, Pa.
National Appliance Co., Detroit, Mich.
New York Blower Co., Chicago, Ill.
Peerless Electric Co., Warren, Ohio.
Pryne & Co., Inc., Pomona, Calif.
Scott-Newcomb, Inc., St. Louis, Mo.
Signal Electric Mfg. Co., Menominee, Mich.
Simpson Screen Co., Oakland, Calif.
Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
Sprouse Co., Inc., V. E., Columbus, Ind.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Stewart Mfg. Co., Indianapolis, Ind.
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Universal Blower Co., Birmingham, Mich.
Ward Industries, Inc., Edgar T., Chicago, Ill.
West Wind Corp., Seattle, Wash.
Western Blower Co., Seattle, Wash.

Night Air Cooling

Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.
Air Controls, Inc., Cleveland, Ohio.
Air Equipment Co., Inc., Chicago, Ill.
Airmaster Corp., Chicago, Ill.
Allen Ventilator Div. Production Planning Co., Rochester, Mich.
American Blower Corp., Detroit, Mich.
American Coolair Corp., Jacksonville, Fla.
Arlington Electric Co., St. Louis, Mo.
Baldor Electric Co., St. Louis, Mo.
Bar-Brook Mfg. Co., Inc., Shreveport, La.
Belter Electric Mfg. Co., G. J., St. Louis, Mo.
Bern's Mfg. Co., Chicago, Ill.
Buffalo Forge Co., Buffalo, N. Y.
C & H Air Conditioning Fan Co., Inc., Atlanta, Ga.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Cirklair Products Div. Folsom Co., Inc., Dallas, Texas.
Climax Machinery Co., Indianapolis, Ind.
Cook Co., Loren, Berea, Ohio.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Dearborn Stove Co., Dallas, Texas.
De Bothezat Fans Div. American Machine & Metals, Inc., East Moline, Ill.
Diehl Mfg. Co., Somerville, N. J.
Dual-Air Fan Corp., South Elgin, Ill.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Emerson Electric Mfg. Co., St. Louis, Mo.
Fresh Air Circulator Co., Houston, Texas.
Fresh'nd-Aire Co., Chicago, Ill.
General Blower Co., Inc., Philadelphia, Pa.
Great National Air Conditioning Corp., Oklahoma City, Okla.
Hartzell Propelier Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
Hunter Fan & Ventilating Co., Memphis, Tenn.
Ilg Electric Ventilating Co., Chicago, Ill.
International Oil Burner Co., St. Louis, Mo.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
King Co., Owatonna, Minn.
Lakewood Engineering & Mfg. Co., Chicago, Ill.
Lau Blower Co., Dayton, Ohio.
Lonergan Mfg. Co., Albion, Mich.
Martin Fan & Blower Co., Chicago, Ill.
Mellish & Murray Co., Chicago, Ill.
Meier Electric & Machine Co., Inc., Indianapolis, Ind.
National Engineering & Mfg. Co., Kansas City, Mo.
National Gas Equipment Co., Inc., Terrell, Texas.
Nelson Products, Herman, American Air Filter Co., Louisville, Ky.
New York Blower Co., Chicago, Ill.
Palmer Mfg. Corp., Phoenix, Ariz.
Peerless Electric Co., Warren, Ohio.
Phelps Mfg. Co., Little Rock, Ark.
Reed Unit-Fans, Inc., New Orleans, La.
Robbins & Myers, Inc., Springfield, Ohio.
Schwitzer-Cummins Co., Indianapolis, Ind.
Seco-Lite Mfg. Co., St. Louis, Mo.
South Bend Air Products, Inc., South Bend, Ind.
Sprouse Co., Inc., V. E., Columbus, Ind.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Stonewall Co., Chicago, Ill.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Victor Electric Products, Inc., Cincinnati, Ohio.
Viking Air Conditioning Corp., Cleveland, Ohio.
Ward Industries, Inc., Edgar T., Chicago, Ill.
Western Blower Co., Seattle, Wash.
Wind-Way Ventilator Co., New Orleans, La.

Ventilating System (Capacity 4,000 cfm up for connection to ductwork)

Acme Equipment Co., Muskogee, Okla.

Aerovent Fan Co., Piqua, Ohio.
Air Controls, Inc., Cleveland, Ohio.
Airfan Engineering Co., Los Angeles, Calif.
Airmaster Corp., Chicago, Ill.
Allen Ventilator Div. Production Planning Co., Rochester, Mich.
American Coolair Corp., Jacksonville, Fla.
Ammerman Co., C. L., Minneapolis, Minn.
Arex Co., Chicago, Ill.
Arlington Electric Co., St. Louis, Mo.
Babbin, Inc., New York, N. Y.
Bar-Brook Mfg. Co., Inc., Shreveport, La.
Belter Electric Mfg. Co., G. J., St. Louis, Mo.
Bern's Mfg. Co., Chicago, Ill.
Bertram Co., Harvey P., Cincinnati, Ohio.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Bishop Co., R. H., Champaign, Ill.
Buffalo Forge Co., Buffalo, N. Y.
C. & H. Air Conditioning Fan Co., Inc., Atlanta, Ga.
Campbell Co., E. K., Kansas City, Mo.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Century Fan & Ventilator Co., Stamford, Conn.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
Chicago Blower Corp., Franklin Park, Ill.
Chicago Fan & Fin Coil Co., Chicago, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Cirklair Products Div. Folsom Co., Inc., Dallas, Texas.
Clarage Fan Co., Kalamazoo, Mich.
Climax Machinery Co., Indianapolis, Ind.
Commercialaire, Inc., Brooklyn, N. Y.
Coppus Engineering Corp., Worcester, Mass.
Dana Fan & Blower Corp., Cincinnati, Ohio.
De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
De Vilbiss Co., Toledo, Ohio.
Diehl Mfg. Co., Somerville, N. J.
Dual-Air Fan Corp., South Elgin, Ill.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Emerson Electric Mfg. Co., St. Louis, Mo.
Ford Blow Pipe & Mfg., Co., Memphis, Tenn.
Fresh'nd-Aire Co., Chicago, Ill.
Gallaher Co., Omaha, Nebr.
General Blower Co., Morton Grove, Ill.
Hartzell Propeller Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
Holden Fan Co., Detroit, Mich.
Hunter Fan & Ventilating Co., Memphis, Tenn.
Ilg Electric Ventilating Co., Chicago, Ill.
International Engineering, Inc., Dayton, Ohio.
International Oil Burner Co., St. Louis, Mo.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
Joy Mfg. Co., Pittsburgh, Pa.
King Co., Owatonna, Minn.
Kloppenborg Aluminum Foundry, Davenport, Iowa.
Koppers Co., Inc., Tar Products Div., Pittsburgh, Pa.
Lakewood Engineering & Mfg. Co., Chicago, Ill.
Lau Blower Co., Dayton, Ohio.
Martin Fan & Blower Co., Chicago, Ill.
M & E Mfg. Co., Indianapolis, Ind.
Meier Electric & Machine Co., Inc., Indianapolis, Ind.
Moore Co., Marceline, Mo.
Mountain States Equipment Co., Denver, Colo.
Murray Co. of Texas, Inc., Dallas, Texas.
Myers Electric Co., Inc., Pittsburgh, Pa.
National Gas Equipment Co., Inc., Terrell, Texas.
Nelson Products, Herman, American Air Filter Co., Louisville, Ky.
New York Blower Co., Chicago, Ill.
Palmer Mfg. Corp., Phoenix, Ariz.
Peerless Electric Co., Warren, Ohio.
Reynolds Electric Co., River Grove, Ill.
Robbins & Myers, Inc., Springfield, Ohio.
Schwitzer-Cummins Co., Indianapolis, Ind.
Seco-Lite Mfg. Co., St. Louis, Mo.
Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
South Bend Air Products, Inc., South Bend, Ind.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Trane Co., LaCrosse, Wis.
Truflo Fan Co., Harmony, Pa.
Uno Ventilator Co., Malden, Mass.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Viking Air Conditioning Corp., Cleveland, Ohio.
Ward Industries Inc., Edgar T., Chicago, Ill.
Western Blower Co., Seattle, Wash.
Western Engineering & Mfg. Co., Venice, Calif.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Wind-Way Fan & Ventilator Co., New Orleans, La.
Wing Mfg. Co., L. J., Linden, N.J.

FASTENINGS, SHEET METAL

Camloc Fastener Corp., Paramus, N. J.
Cuyahoga Spring Co., Cleveland, Ohio.
Devices, Inc., New York, N. Y. (Surface anchors)
Diamond Expansion Bolt Co., Inc., Garwood, N. J.
Friedley-Voshardt Co., Chicago, Ill.
Gerrard & Co., A. J., Melrose Park, Ill.
Shakeproof Div., Illinois Tool Wks., Chicago, Ill.
Southco Div., South Chester Corp., Philadelphia, Pa.
Star Expansion Bolt Co., New York, N. Y.
Star Stainless Screw Co., Paterson, N. J.
Stic-Klip Mfg. Co., Cambridge, Mass.
Tinnerman Products, Inc., Cleveland, Ohio.
United-Carr Fastener Corp., Cambridge, Mass. (Studs, receptacles, clips, special nuts, etc.).
Velocity-Power Tool Co., Pittsburgh, Pa.

FELT, ROOFING

Barber Co., Inc., Philadelphia, Pa.
Barrett Div. Allied Chemical & Dye Corp., New York, N. Y.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Certain-teed Products Corp., Ardmore, Pa.
Detroit Steel Products Co., Detroit, Mich.
Flintkote Co., New York, N. Y.
Globe Roofing Products Co., Inc., Whiting, Ind.
Johns-Manville, New York, N. Y.
Koppers Co., Inc., Pittsburgh, Pa. (Tarred)
Lehon Co., Chicago, Ill.
Lexington Supply Co., Cleveland, Ohio.
National Mfg. Corp., Tonawanda, N. Y.
Ohio Paper Co., Miamisburg, Ohio.
Owens-Corning Fiberglas Corp., Toledo, Ohio.
Reilly Tar & Chemical Corp., Indianapolis, Ind.
Ruberoid Co., New York, N. Y.

FILTERS, AIR

Automatic

Air & Refrigeration Corp., New York, N. Y.
Air Stream Filter Corp., St. Louis, Mo.
American Air Filter Co., Inc., Louisville, Ky.
Continental Air Filters, Inc., Louisville, Ky.
Day Co., Minneapolis, Minn.
Dollinger Corp., Rochester, N. Y.
Farr Co., Los Angeles, Calif.

Cleanable

Air Devices, Inc., New York, N. Y. (Steel wire mesh).
Air & Refrigeration Corp., New York, N. Y. (Fiberglas)
Air Filter Corp., Milwaukee, Wis. (Wire cloth)
Air-Maze Corp., Cleveland, Ohio. (Metal wire baffles)
Air Stream Filter Corp., St. Louis, Mo.
American Air Filter Co., Inc., Louisville, Ky. (Glass fibers)
Continental Air Filters, Inc., Louisville, Ky. (Steel & aluminum)
Coppus Engineering Corp., Worcester, Mass. (Felt).
Dollinger Corp., Rochester, N. Y. (Feltex, Glastex, heat resistant cotton).
Drico Industrial Corp., New York, N. Y. (Felt)
Farr Co., Los Angeles, Calif. (Metal)
Goodyear Tire & Rubber Co., Akron, Ohio.
Kauffman Air Conditioning Corp., St. Louis, Mo. (Aluminum)
Mine Safety Appliance Co., Pittsburgh, Pa.
Research Products Corp., Madison, Wis. (Metal).
Smith Filter Corp., Moline, Ill. (Aluminum)
Somers, Inc., H. J., Detroit, Mich. (Hair & glass)
Universal Air Filter Corp., Duluth, Minn. (Cellulose).
York Corp., York, Pa.

Electrostatic

Air-Maze Corp., Cleveland, Ohio.
American Air Filter Co., Inc., Louisville, Ky.
American-Standard, Pittsburgh, Pa.
Dollinger Corp., Rochester, N. Y.
Lennox Furnace Co., Marshalltown, Iowa.
Trion, Inc., McKees Rocks, Pa.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

Grease for Range Hoods

Air Devices, Inc., New York, N. Y.
Air Filter Corp., Milwaukee, Wis.
Air-Maze Corp., Cleveland, Ohio.
American Air Filter Co., Inc., Louisville, Ky.
Continental Air Filters, Inc., Louisville 1, Ky.
Farr Co., Los Angeles, Calif.
Research Products Corp., Madison, Wis.

Smith Filter Corp., Moline, Ill.

Throwaway

American Air Filter Co., Inc., Louisville, Ky.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Beck Mfg. Co., New Albany, Ind.
Cambridge Corp., Syracuse, N.Y.
Detroit Air Filter Div., Air-Maze Corp., Cleveland, Ohio. (Fiberboard)
Drico Industrial Corp., New York, N. Y. (Glass)
Glasfloss, New York, N. Y.
Harvey, Inc., Sid, Valley Stream, N. Y.
Master Products Co., Inc., Chicago, Ill.
Owens-Corning Fiberglas Corp., Toledo, Ohio. (Fiberglas).
Research Products Corp., Madison, Wis.
Universal Air Filter Corp., Duluth, Minn. (Cellulose).
Wilson & Co., Inc., Chicago, Ill. (Animal Hair).
York Corp., York, Pa.

FILTERS, FUEL OIL

A-P Controls Corp., Milwaukee, Wis.
Barclay Co., Robt., Chicago, Ill.
Commercial Filters Corp., Melrose, Mass.
Coz-Nef Corp., St. Johnsbury, Vt.
Cuno Engineering Corp., Meriden, Conn.
Eddington Metal Specialty Co., Eddington, Pa.
Fram Corp., Providence, R. I.
General Filters, Inc., Detroit, Mich.
Harvey, Inc., Sid, Valley Stream, N.Y.
Kraissl Co., Inc., Hackensack, N. J.
Marquart Mfg. Co., Oakland, Calif.
Meldon Industries, Detroit, Mich.
Morse-Smith-Morse, Inc., Watertown, Mass.
Rega Mfg. Co., Rochester, N. Y.
Sparkler Mfg. Co., Mundelein, Ill.
W.G.B. Oil Clarifier, Inc., Kingston, N. Y.

FILTERS, ODOR

See Adsorbers, Odor

FIRE BRICK

See Refractories

FIREPOTS

See Repairs, Stove and Furnace

FITTINGS AND ACCESSORIES

Blow Pipe

(Elbows, Flanges, Hangers, Hoods and Sweeps, Joints, Rings, Tubing)

Barcafer Mfg. Co., Salina, Kans.
Carolina Blower Co., Inc., Greensboro, N. C.
Chicago Metal Mfg. Co., Chicago, Ill.
Day Co., Minneapolis, Minn.
Falstrom Co., Passaic, N. J.
Goethel Sheet Metal Works, Inc., Alfred, Milwaukee, Wis.
Kindt-Collins Co., Cleveland, Ohio.
Kirk & Blum Mfg. Co., Cincinnati, Ohio. (Adjustable bluffing hoods).
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Lyman Co., H. B., Southampton, Mass.
National Metal Fabricators, Chicago, Ill.
Newcomb-Detroit Co., Detroit, Mich.
Northern Blower Co., Cleveland, Ohio.
Peacard Co., M. A., Boston, Mass.
Penn Supply & Metal Corp., Philadelphia, Pa.
Puhl & Hepper Mfg. Co., Inc., St. Louis, Mo.
Skinner Heating & Ventilating Co., St. Louis, Mo.
Western Blower Co., Seattle, Wash.
Winkler & Sons, Inc., A. E., Milwaukee, Wis.
Young & Bertke Co., Cincinnati, Ohio.

Conductor

(Elbows, Heads, Hooks, Shoes, Straps, Drains, Scuppers, etc.)

Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
Alabama Metal Lath Co., Birmingham, Ala.
American Metal Products, Los Angeles, Calif.
Atchison Specialty Mfg. Co., Atchison, Kans. (Scuppers, drains).
Barnes Metal Products Co., Chicago, Ill.
Berger Bros. Co., Philadelphia, Pa.
Berger Mfg. Div. Republic Steel Corp., Canton, Ohio.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cincinnati Elbow Co., Cincinnati, Ohio.
T. F. Crary, Middleport, Ohio. (Cut offs)
Dieckmann Co., Ferdinand, Cincinnati, Ohio.
Downs-Smith Brass & Copper Co., New York City, N. Y.
Duro-Dyne Corp., Hempstead, L.I., N.Y.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Franck & Fric, Cleveland, Ohio.
Galvan Mfg. Co., New Albany, Ind. (Cutoffs, elbows, etc.)
Gerhardt Co., Inc., Geo. T., Sausalito, Calif.
Gray Metal Products, Inc., Rochester, N. Y.
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Inland Steel Products Co., Milwaukee, Wis.
Klauer Mfg. Co., Dubuque, Iowa.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lamb & Ritchie Co., Cambridge, Mass.
Levow, David, New York, N. Y.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Maysteel Products, Inc., Milwaukee, Wis.
Miller & Doing, Brooklyn, N. Y.
New Delphos Mfg. Co., Delphos, Ohio.
Newport Steel Corp., Newport, Ky.
Northwest Metal Products, Inc., Seattle, Wash.
Obdyke, Inc., B. P., Philadelphia, Pa.
Ohio Wire Products Co., Dover, Ohio. (Straps)
Peacard Co., M. A., Boston, Mass.
Penn Supply & Metal Corp., Philadelphia, Pa.
Quaker State Metals Co., Mountville, Pa.
Reeves Steel & Mfg. Co., Dover, Ohio.
Reynolds Metals Co., Louisville, Ky.
Rival Strap Corp., New York, N. Y. (Ornamental conductor straps).
Roofing & Supply Co., Chattanooga, Tenn.
Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.
St. Paul Corrugating Co., St. Paul, Minn.
Schoedinger, F. O., Columbus, Ohio.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sheet Metal Products Co., Peoria, Ill.
Sioux Steel Co., Sioux Falls, S. Dak.
Thor Metal Products Co., Inc., Syracuse, N. Y.
Tiffin Art Metal Co., Tiffin, Ohio. (Heads)
Wheeling Corrugating Co., Wheeling, W. Va.
Wallace Co., William, Metalbestos Div., Belmont, Calif.

Control Systems

(Terminals, terminal blocks, connectors, ignition cable, thermostat cable, etc.)

Buchanan Electric Products Corp., Hillside, N. J.
Barber-Colman Co., Rockford, Ill.

Furnace Pipe

(Angles, Boots, Elbows, Heads, Joints, Offsets, Tees, etc.)

Acer & Whedon, Inc., Medina, N. Y.
Acme Furnace Fitting Co., Chicago, Ill.
Acme Mfg. Co., Philadelphia, Pa.
Adelta Mfg. Co., Inc., Philadelphia, Pa.
Aireflo Furnace Pipe Co., Van Dyke, Mich.
Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
American Metal Products, Los Angeles, Calif.
Armstrong Furnace Co., Columbus, Ohio.
Beckett & Co., Thomas, Dallas, Texas.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bergstrom Mfg. Corp., Neenah, Wis.
Bieler & Son, Long Island City, N. Y. (Adjustable elbows).
Braden Mfg. Co., Terre Haute, Ind.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Champion Furnace Pipe Co., Peoria, Ill.
Char-Gale Mfg. Co., Minneapolis, Minn.
Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Corbman Bros., Inc., Philadelphia, Pa.
Detroit Safety Furnace Pipe Co., Detroit, Mich.
Fisbach, Albert N., Dubuque, Iowa. (Elbows)
Enderle Inc., Ltd., Frank X., Los Angeles, Calif.
Excelsior Steel Furnace Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Gary Steel Products Co., Gary, Ind.
Grand Island Furnace & Supply Co., Grand Island, Nebr.
Gray Metal Products, Inc., Rochester, N. Y.
Green Colonial Furnace Co., Des Moines, Iowa.
Henry Furnace Co., Medina, Ohio.
Home Furnace Co., Holland, Mich.
Howes-Woods Co., Cambridge, Mass.
Hugert Mfg. Co., Medina, Ohio.
Inland Steel Products Co., Milwaukee, Wis.
International Heater Co., Utica, N. Y.
J & J Sheet Metal Co., Van Dyke, Mich. (Elbows)
Jettronaire, Inc., McKeesport, Pa.

Juniper Elbow Co., Inc., Middle Village, L. I., N. Y.
Keith Furnace Co., Des Moines, Iowa.
Krauser-Boyd, Inc., North Tonawanda, N. Y. (Angles, elbows, boots, heads, etc.)
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis. (Elbows)
Lennox Furnace Co., Marshalltown, Iowa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Lyman Co., H. B., Southampton, Mass.
Lyon, Conklin & Co., Inc., Baltimore, Md.
Made-Rite Co., Inc., Newport, Ky.
Majestic Co., Inc., Huntington, Ind.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co., Marshall, Mich.
Metalmen, Inc., Chicago, Ill.
Meyer & Bro. Co., F, Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Northwest Metal Products, Inc., Seattle, Wash.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Peacard Co., M. A., Boston, Mass.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Penn Supply & Metal Corp., Philadelphia, Pa.
Perfection Furnace Pipe Co., Toledo, Ohio.
Portland Stove Foundry Co., Portland, Maine.
Premier Furnace Co., Dowagiac, Mich.
Ralph Mfg. Co., Inc., Wadsworth, Ohio.
Reeves Steel & Mfg. Co., Dover, Ohio.
Riggin Metal Products, Inc., Kankakee, Ill.
Rock Island Register Co., Rock Island, Ill.
Roofing & Supply Co., Chattanooga, Tenn.
Round Oak Co., Inc. of Indiana, Dowagiac, Mich.
Schecter Bros. Co., Philadelphia, Pa.
Schoedinger, F. O., Columbus, Ohio.
Sheet Metal Specialty Div. Follansbee Steel Corp., Pittsburgh, Pa.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sioux Steel Co., Sioux Falls, S. D.
Souther Iron Co., E. E., St. Louis, Mo.
Standard Furnace Supply Co., Ltd., Omaha, Nebr.
Stratton & Terstegge Co., Louisville, Ky.
Superior Products Co., Omaha, Nebr.
Thor Metal Products Co., Inc., Syracuse, N. Y.
Tiffin Art Metal Co., Tiffin, Ohio. (Angles, boots, heads, joints & elbows)
Tri-State Heating Supply, Inc., Fort Wayne, Ind.
United States Register Co., Battle Creek, Mich. (Elbows & angles)
Waterman-Waterbury Co., Minneapolis, Minn.
Waverly Heating Supply Co., Boston, Mass.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheelock Co., Geo. F., Birmingham, Ala.
Wilder Products Co., Springfield, Ohio.
Williamson Heater Co., Cincinnati, Ohio.
Youngstown Furnace Co., Youngstown, Ohio.

Gutter

(Hangers, Strainers, Miters, Ends, Thimbles, etc.)

Abbot Mfg. Co., Painesville, Ohio. (Hangers).
Acme Mfg. Co., Philadelphia, Pa.
Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
American Metal Products, Los Angeles, Calif.
Barnes Metal Products Co., Chicago, Ill.
Berger Bros. Co., Philadelphia, Pa.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
Downs-Smith Brass & Copper Co., New York, N. Y.
Eav-Tex Co., Havertown, Pa. (Roof gutter protection).
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Enderle Inc., Ltd., Frank X., Los Angeles, Calif.
Famous Furnace Co., Cleveland, Ohio. (Strap hangers, end caps).
Galvan Mfg. Co., New Albany, Ind.
Grand Rapids Wire Products Co., Grand Rapids, Mich.
Gray Metal Products, Inc., Rochester, N. Y.
Harrison Steel Cabinet Co., Chicago, Ill.
Hexdall, A. M., Morris, Ill.
Hussey & Co., C. G., Pittsburgh, Pa. (Copper).
Inland Steel Products Co., Milwaukee, Wis.
J & J Sheet Metal Co., Van Dyke, Mich.
Klauer Mfg. Co., Dubuque, Iowa.
Krauser-Boyd, Inc., North Tonawanda, N. Y., (Eaves trough, hangers, miters).
LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
Lamb & Ritchie Co., Cambridge, Mass.
Levow, David, New York, N. Y.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
New Delphos Mfg. Co., Delphos, Ohio.
Newport Steel Corp., Newport, Ky.
Northwest Metal Products, Inc., Seattle, Wash.
Obdyke, Inc., B. P., Philadelphia, Pa.
Ohio Wire Products Co., Dover, Ohio. (Hangers).
Peacard Co., M. A., Boston, Mass.
Penn Supply & Metal Corp., Philadelphia, Pa.
Ralph Mfg. Co,. Inc., Wadsworth, Ohio.
Reeves Steel & Mfg. Co., Dover, Ohio.
Reynolds Metals Co., Louisville, Ky. (Aluminum).
Riggin Metal Products, Inc., Kankakee, Ill.
Roofing & Supply Co., Chattanooga, Tenn.
Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.
St. Paul Corrugating Co., St. Paul, Minn.
Schoedinger, F. O., Columbus, Ohio.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sheet Metal Products Co., Peoria, Ill.
Sioux Steel Co., Sioux Falls, S. D.
Snap-On Mfg. Co., Chicago, Ill. (Hangers).
Souther Iron Co., E. E., St. Louis, Mo.
Southern States Iron Roofing Co., Savannah, Ga.
Steele Mfg. Co., Ashland, Ky. (Gutter guards)
Thor Metal Products Co., Inc., Syracuse, N. Y.
Tiffin Art Metal Co., Tiffin, Ohio. (Hangers, miters, ends, thimbles)
Tiffin Eaves Trough Clamp Co., Tiffin, Ohio. (Clamp).
Wade Mfg. Co., Div. of Woodruff & Edwards, Inc., Elgin, Ill. (Roof Drains).
Wheeling Corrugating Co., Wheeling, W. Va.
Wallace Co., William, Metalbestos Div., Belmont, Calif.

Oil Burner

(Combustion heads, tank solvents, vent caps, etc.)

Ampion Corp., Long Island City, N. Y. (Oil tank solvent).
Barclay Co., Robt., Chicago, Ill.
Bearlee Products Co., Green Bay, Wis. (Vent caps)
Boston Machine Works Co., Lynn, Mass. (Nozzle extractor)
Burnrite Valve Mfg. Corp., Mt. Vernon, N. Y. (Anti-syphon valves)
Celco Corp., New York, N. Y. (Solvent)
Equi-Dyne, Inc., Chicago, Ill.
Fisher Governor Co., Marshalltown, Iowa. (Liquid level controller)
Gas & Oil Industry Laboratories, Inc., Irvington, N. J. (Valves).
Guardian Products Corp., Michigan City, Ind.
Hays Mfg. Co., Erie, Pa. (Valves & fittings)
Heetrliter Co., Newberg, Ore. (Lighter)
Hercules Chemical Co., Inc., New York, N. Y. (Tank solvent & oil line joint compound)
Leisur-Maid Mfg. Corp., Grand Rapids, Mich. (Furnace door safety spring & door closer)
Lord Mfg. Co., Erie, Pa. (Flexible couplings)
Lovejoy Flexible Coupling Co., Chicago, Ill. (Flexible couplings)
Modern Die & Machine Co., Boston, Mass. (Combustion head)
Morse-Smith-Morse, Inc., Watertown, Mass. (Vent caps, valves)
Mueller Co., Decatur, Ill. (Valves)
Oil Equipment Mfg. Co., New Haven, Conn. (Oil storage tank fittings)
Petroleum Solvents Corp., New York, N. Y. (Oil tank solvent)
Radiator Specialty Co., Charlotte, N. C. (Tank solvent, gasket & joint sealing compounds)
Rajah Co., Bloomfield, N. J. (Wire crimpers & terminals)
Red Wing Oil Burner Co., Inc., Medford, Mass. (Tank solvent)
Richfield Mfg. Corp., New Rochelle, N. Y. (Combustion heads)
S.O.S. Products Co., Inc., Brookyn, N. Y. (Tank solvent)
Siemon Mfg. Co., Kansas City, Mo.
Shell Oil Co., New York, N. Y. (Combustion head).

Smoke Pipe

(Draw-bands, Clean-outs, Collars, Tees, etc.)

Acer & Whedon, Inc., Medina, N. Y.
Acme Furnace Fitting Co., Chicago, Ill.
Acme Mfg. Co., Philadelphia, Pa.
Adelta Mfg. Co., Inc., Philadelphia, Pa.
Aireflo Furnace Pipe Co., Van Dyke, Mich.

Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
American Metal Products, Los Angeles, Calif.
Armstrong Furnace Co., Columbus, Ohio.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bergstrom Mfg. Corp., Neenah, Wis.
Bieler & Sons, Inc., L., Long Island City, N. Y.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Cary Mfg. Co., Waupaca, Wis.
Champion Furnace Pipe Co., Peoria, Ill.
Char-Gale Mfg. Co., Minneapolis, Minn.
Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Corbman Bros., Inc., Philadelphia, Pa.
Detroit Safety Furnace Pipe Co., Detroit, Mich.
Eisbach, Albert N., Dubuque, Iowa. (Drawbands)
Excelsior Steel Furnace Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Famous Furnace Co., Cleveland, Ohio.
Gary Steel Products Co., Gary, Ind.
Grand Island Furnace & Supply Co., Grand Island, Nebr.
Gray Metal Products, Inc., Rochester, N. Y.
Green Colonial Furnace Co., Des Moines, Iowa.
Henry Furnace Co., Medina, Ohio.
Home Furnace Co., Holland, Mich.
Howes-Woods Co., Cambridge, Mass.
Hugert Mfg. Co., Medina, Ohio.
Inland Steel Products Co., Milwaukee, Wis.
International Heater Co., Utica, N. Y.
J & J Sheet Metal Co., Van Dyke, Mich.
Jettronaire, Inc., McKeesport, Pa.
Keith Furnace Co., Des Moines, Iowa.
Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Krauser-Boyd, Inc., North Tonawanda, N. Y.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lennox Furnace Co., Marshalltown, Iowa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Lyman Co., H. B., Southampton, Mass.
Made-Rite Co., Inc., Newport, Ky.
Majestic Co., Inc., Huntington, Ind.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co., Marshall, Mich.
Metalmen, Inc., Chicago, Ill.
Meyer & Bro. Co., F., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Northwest Metal Products, Inc., Seattle, Wash.
Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
Peacard Co., M. A., Boston, Mass.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Penn Supply & Metal Corp., Philadelphia, Pa.
Portland Stove Foundry Co., Portland, Maine.
Premier Furnace Co., Dowagiac, Mich.
Ralph Mfg. Co., Inc., Wadsworth, Ohio.
Reeves Steel & Mfg. Co., Dover, Ohio.
Riggin Metal Products, Inc., Kankakee, Ill.
Rock Island Register Co., Rock Island, Ill.
Roofing & Supply Co., Chattanooga, Tenn.
Round Oak Co., Inc. of Indiana, Dowagiac, Mich.
Schecter Bros. Co., Philadelphia, Pa.
Schoedinger, F. O., Columbus, Ohio.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sheet Metal Specialty Div., Follansbee Steel Corp., Pittsburgh, Pa.
Sioux Steel Co., Sioux Falls, S. Dak.
Souther Iron Co., E. E., St. Louis, Mo.
Standard Furnace Supply Co., Ltd., Omaha, Nebr.
Stratton & Terstegge Co., Louisville, Ky.
Superior Products Co., Omaha, Nebr.
Thor Metal Products Co., Inc., Syracuse, N. Y.
Tierney Rotor Ventilator Co., Minneapolis, Minn.
Tiffin Art Metal Co., Tiffin, Ohio. (Draw-bands, clean-outs, collars, tees)
Tri-State Heating Supply, Inc., Fort Wayne, Ind.
United States Register Co., Battle Creek, Mich. (Elbows & angles)
Waterman-Waterbury Co., Minneapolis, Minn.
Waverly Heating Supply Co., Boston, Mass.
Wheeling Corrugating Co., Wheeling, W. Va.
Wilder Products Co., Springfield, Ohio.
Williamson Heater Co., Cincinnati, Ohio.
Youngstown Furnace Co., Youngstown, Ohio.

Wiring, Complete Assemblies, Custom-Made

Cornish Wire Co., New York, N. Y.

FITTINGS, COPPER TUBE, COMPRESSION AND FLARED

American Brass Co., Waterbury, Conn.
Barcafer Mfg. Co., Salina, Kans.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Commonwealth Brass Corp., Detroit, Mich.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Crane Co., Chicago, Ill.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Everhot Products Co., Chicago, Ill.
Fisher Brass Foundry, Los Angeles, Calif.
Gray-Wilson Co., Detroit, Mich.
Hays Mfg. Co., Erie, Pa.
Imperial Brass Mfg. Co., Chicago, Ill.
Kerotest Mfg. Co., Pittsburgh, Pa.
Madden Brass Products Co., Chicago, Ill.
Market Forge Co., Everett, Mass.
Mueller Brass Co., Port Huron, Mich.
Mueller Co., Decatur, Ill.
Northern Indiana Brass Co., Elkhart, Ind.
Oil Equipment Mfg. Co., New Haven, Conn.
Parker Appliance Co., Cleveland, Ohio.
Scovill Mfg. Co., Waterville Div., Waterville, Conn.
Weatherhead Co., Cleveland, Ohio.

FITTINGS, HUMIDIFIER, WATER LINE

American Brass Co., Waterbury, Conn.
Hays Mfg. Co., Erie, Pa.
McDonnell & Miller, Inc., Chicago, Ill.
Maid-O'-Mist, Inc., Chicago, Ill.
Mueller Brass Co., Port Huron, Mich.
Reichert Float & Mfg. Co., Toledo, Ohio.
Ross Sprinkler Co., Pasadena, Calif.
Skuttle Mfg. Co., Detroit, Mich.

FLANGING MACHINES

See Machines, Flanging

FLASHINGS, ROOF, PREFABRICATED

American Metal Products, Los Angeles, Calif.
Alpha Metals, Inc., Jersey City, N. J.
American Steel Band Co., Pittsburgh, Pa.
Atchison Specialty Mfg. Co., Atchison, Kans.
Barrett Div. Allied Chemical & Dye Corp., New York, N. Y.
Berger Mfg. Div., Republic Steel Co., Canton, Ohio.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cheney Flashing Co., Trenton, N. J.
Division Lead Co., Chicago, Ill.
Eagle-Picher Co., Cincinnati, Ohio.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Figge Mfg. Co., Chicago, Ill.
Flemm Lead Co., Inc., Long Island City, N. Y.
Fry Reglet Corp., Bremerton, Wash.
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Inland Steel Products Co., Milwaukee, Wis.
Keystone Flashing Co., Philadelphia, Pa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
National Lead Co., New York City, N. Y.
New Delphos Mfg. Co., Delphos, Ohio.
Overly Mfg. Co., Greensburg, Pa.
Penn Supply & Metal Corp., Philadelphia, Pa.
Plasteel Products Co., Washington, Pa.
Quaker State Metals Co., Mountville, Pa.
Reeves Steel & Mfg. Co., Dover, Ohio.
Revere Copper & Brass Inc., New York, N. Y.
Roofing & Supply Co., Chattanooga, Tenn.
Schoedinger, F. O., Columbus, Ohio.
Simplex Mfg. Co., Fond du Lac, Wis.
Sisalkraft Co., Chicago, Ill.
Vallas, Lionel, Chicago, Ill.
Van Noorden Co., E., Boston, Mass.
Wheeling Corrugating Co., Wheeling, W. Va.
Wallace Co., William, Metalbestos Div., Belmont, Calif.

FLASHINGS, THROUGH-WALL, PREFABRICATED

American Brass Co., Waterbury, Conn.
American Steel Band Co., Pittsburgh, Pa.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cheney Flashing Co., Trenton, N. J.
Division Lead Co., Chicago, Ill.
Figge Mfg. Co., Chicago, Ill.
Hussey & Co., C. G., Pittsburgh, Pa.
Keystone Flashing Co., Philadelphia, Pa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
New Delphos Mfg. Co., Delphos, Ohio.
Revere Copper and Brass Inc., New York, N. Y.

Roofing & Supply Co., Chattanooga, Tenn.
Sisalkraft Co., Chicago, Ill.
Vallas, Lionel, Chicago, Ill.
Van Noorden Co., E., Boston, Mass.
Wasco Flashing Co., Cambridge, Mass.

FLUE GAS ANALYZERS

See Analyzers, CO, Portable

FLUX

Soldering

Allen Co., Inc., L. B., Chicago, Ill. (Stainless steel, silver solder, brazing and all other metals)
All-State Welding Alloys Co., Inc., White Plains, N. Y. (Aluminum, cast iron, silver, copper, magnesium)
Alpha Metals ,Inc., Jersey City, N. J. (All metals)
Aluminum Co. of America, Pittsburgh, Pa. (Aluminum)
American Chemical Paint Co., Ambler, Pa. (All metals)
American Products Corp., Chicago, Ill. (Stainless, monel, inconel, nickel, nickelchrome, alloys)
American Solder & Flux Co., Philadelphia, Pa. (All metals)
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y. (Aluminum, copper, galv. & stainless steel)
Benson Co., Inc., Alex R., Hudson, N. Y. (Copper, galv. & stainless steel)
Burnley Battery & Mfg. Co., North East, Pa. (Paste, salts, solution). (All metals except aluminum and stainless steel)
Carajon Chemical Co., Inc., Fremont, Mich. (Copper, galv. & stainless steel)
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Chicago Smelting & Refining Corp., Chicago, Ill. (Rosin & acid)
Diener Mfg. Co., Geo. W., Chicago, Ill.
Division Lead Co., Chicago, Ill. (All metals)
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (Cast iron, copper; plain, stainless, galv., and tinned steel)
Eutectic Welding Alloys Co., Flushing, N.Y. (Aluminum, copper, galv. & stainless steel)
Farrelloy Co., Philadelphia, Pa. (All metals)
Fusion Engineering, Cleveland, Ohio. (All metals)
Garden City Laboratory, Div. Pritchardsons, Chicago, Ill. (Galv. steel)
Glaser Lead Co., Inc., Brooklyn, N. Y. (Every purpose).
Handy & Harman, New York, N. Y. (Brass, bronze & nickel alloys)
Hercules Chemical Co., Inc., New York, N. Y. (All metals except aluminum & stainless steel)
Industrial Service Laboratories, Milwaukee, Wis. (Stainless, Galv., copper).
Johnson Gas Appliance Co., Cedar Rapids, Iowa.
Johnson Mfg. Co., Mount Vernon, Iowa. (Aluminum, copper, galv. stainless steel)
Kester Solder Co., Chicago, Ill. (Aluminum, copper, galv. & stainless steel)
Kirk & Son, Morris P., Los Angeles, Calif.
Klem Chemicals, Inc., Dearborn, Mich. (Copper, iron, stainless steel)
Lake Chemical Co., Chicago, Ill.
Langsenkamp Co., F. H., Indianapolis, Ind. (Stainless steel)
Lenk Mfg. Co., Boston, Mass. (Copper; galv., & stainless steel)
Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.
London Chemical Co., Chicago, Ill. (Galv. iron, stainless steel)
Lukens Metal Co., Thos. F., Philadelphia, Pa. (Copper, galv. & stainless steel)
Marquette Mfg. Co., Inc., Minneapolis, Minn. (Aluminum, silver)
Mueller Brass Co., Port Huron, Mich. (Brass)
National Cylinder Gas Co., Chicago, Ill. (All metals)
National Lead Co., New York, N. Y. (All metals)
Neilson Chemical Co., Detroit, Mich. (For steel).
Paul-Lewis Laboratories, Inc., Milwaukee, Wis.
Pfanstiehl Chemical Co., Waukegan, Ill. (Copper, galv. & stainless steel)
Potomac Mfg. Co., Philadelphia, Pa. (Aluminum, copper, galv. & stainless steel)
Reiner & Campbell Co., Inc., Newark, N. J.
Ruby Chemical Co., Columbus, Ohio. (Copper, galv. & stainless steel)
S.O.S. Products Co., Inc., Brooklyn, N. Y. (All metals)
Sherman & Co., Flushing, N. Y. (Galv. & stainless steel)
Superior Flux & Mfg. Co., Cleveland, Ohio. (All metals)
Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa. (Aluminum)
Tinit Mfg. Co., Inc., Denver, Colo. (All metals).
Turco Products, Inc., Los Angeles, Calif.
United Wire & Supply Corp., Providence, R.I. (Ferrous & nonferrous metals)
Wolfe-Kote Co., Sheboygan, Wis.

Welding

Air Reduction Sales Co., New York, N.Y.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
Aluminum Co. of America, Pittsburgh, Pa.
American Solder & Flux Co., Philadelphia, Pa.
Bastian-Blessing Co., Chicago, Ill.
Eutectic Welding Alloys Corp., Flushing, N.Y.
Farrelloy Co., Los Angeles, Calif. (Also brazing)
International Nickel Co., Inc., New York, N. Y.
Linde Air Products Co., New York, N. Y. (Bronze, cast iron and stainless steel)
Marquette Mfg. Co., Minneapolis, Minn.
Midland Paint & Varnish Co., Cleveland, Ohio.
National Cylinder Gas Co., Chicago, Ill.
Sight Feed Generator Co., West Alexandria, Ohio.
Smith Welding Equipment Corp., Minneapolis, Minn.
Superior Flux & Mfg. Co., Cleveland, Ohio.
Tinit Mfg. Co., Inc., Denver, Colo.
United Wire & Supply Corp., Providence, R.I.

FUEL OIL FILTERS

See Filters, Fuel Oil

FURNACE BLOWERS

See Blowers; Blower-Filter Units; Blower-Washer Units

FURNACE CEMENT

See Cement, Furnace

FURNACE CLEANERS

See Cleaners, Vacuum, Furnace

FURNACE PIPE

See Pipe, Furnace

FURNACE PIPE FITTINGS AND ACCESSORIES

See Fittings and Accessories, Furnace Pipe

FURNACE REGULATORS

See Regulators, Furnace Draft, Mechanical; Controls

FURNACE REPAIRS

See Repairs, Stove and Furnace

FURNACES, PORTABLE, FOR TEMPORARY HEAT

Auburn Burner Co., Auburn, Ind.
Bica Co., Girard, Ohio.
Tjernlund Mfg. Co., St. Paul, Minn.

FURNACES, SOLDERING

Aeroil Products Co., Inc., South Hackensack, N. J.
Bernz Co., Otto, Rochester, N. Y.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Eclipse Fuel Engineering Co., Rockford, Ill.
Fieser Co., F. J., New York, N. Y.
Fusion Engineering, Cleveland, Ohio.
Goss Gas Inc., Glenshaw, Pa.
Hones, Inc., Charles A., Baldwin, N. Y. (Gas).
Inland Steel Products Co., Milwaukee, Wis.
Insto-Gas Corp., Detroit, Mich. (Gas)
Johnson Gas Appliance Co., Cedar Rapids, Iowa.
Met Sales & Mfg. Co., Rockford, Ill.
Mutual Liquid Gas & Equipment Co., Inglewood, Calif.
Polis Mfg. Co., J. D., Chicago, Ill.
Ransome Co., Emeryville, Calif.
Reiner & Campbell Co., Inc., Newark, N. J.
Reliable Gas Products Co., Cedar Rapids, Iowa.
Sanders, J. A., Fulton, N. Y.
Turner Brass Works, Sycamore, Ill.
Unique Mfg. Co., Inc., Chicago, Ill. (Gasoline, Kerosene).
Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., Danvers, Mass. (Electric)
Weiss & Co., H., New York, N. Y.
Weldit, Inc., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.

FURNACES, WARM AIR, GRAVITY

Coal, Cast Iron

Agricola Furnace Co., Inc., Gadsden, Ala.
American Foundry & Furnace Co., Bloomington, Ill.
American Furnace Co., St. Louis, Mo.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Bovee Furnace Works, Waterloo, Iowa.
Crane Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farris Furnace Co., Springfield, Ill.

Favorite Stove Co., Piqua, Ohio.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Green Colonial Furnace Co., Des Moines, Iowa.
Hart Furnace and Supply Co., Louisville, Ky.
Henry Furnace Co., Medina, Ohio.
Hess-Snyder Co., Massillon, Ohio.
Home Furnace Co., Holland, Mich.
Homer Furnace & Foundry Corp., Coldwater, Mich.
International Heater Co., Utica, N. Y.
Katelman Foundry & Mfg. Co., Council Bluffs, Iowa.
Keith Furnace Co., Des Moines, Iowa.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Majestic Co., Inc., Huntington, Ind.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co., Marshall, Mich.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Pittston Stove Co., Pittston, Pa.
Portland Stove Foundry Co., Portland, Maine.
Premier Furnace Co., Dowagiac, Mich.
Quick Furnace & Supply Co., Des Moines, Iowa.
Round Oak Co., Inc., of Ind., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio.
St. Clair Foundry Corp., Centralia, Ill.
Schill Mfg. Co., Crestline, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Skinner Heating & Vent. Co., St. Louis, Mo.
Souther Iron Co., E. E., St. Louis, Mo.
Spear Stove & Heater Co., James, Philadelphia, Pa.
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Thatcher Furnace Co, Garwood, N. J.
Union Mfg. Co., Inc., Boyertown, Pa.
United States Radiator Corp., Detroit, Mich.
Westwick & Son, Inc., John, Galena, Ill.
Wise Furnace Co., Newark, Ohio.
XXth Century Heating & Ventilating Co., Akron, Ohio.

Coal, Steel

American Furnace Co., St. Louis, Mo.
American Radiator and Standard Sanitary Corp., Pittsburgh, Pa.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Andrews Heating Co., Minneapolis, Minn.
Arcweld Mfg. Co., Inc., Seattle, Wash.
Armstrong Furnace Co., Columbus, Ohio.
Bard Mfg. Co., Bryan, Ohio.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bovee Furnace Works, Waterloo, Iowa.
Brenner Co., Jacob, Fond du Lac, Wis.
Campbell Heating Co., Des Moines, Iowa.
Certified Furnace Co., St. Paul, Minn.
Crane Co., Chicago, Ill.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Deshler Foundry & Mach. Wks., Deshler, Ohio.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Floral City Heater Co., Monroe, Mich.
Friendly Furnace & Foundry Co., Sioux City, Iowa.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Furblo Co., Hermansville, Mich.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart & Crouse Corp., Oneida, N. Y.
Hart Furnace and Supply Co., Louisville, Ky.
Henry Furnace Co., Medina, Ohio.
Hess-Snyder Co., Massillon, Ohio.
Hess Co., Chicago, Ill.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N. Y.
Jackson & Church Co., Saginaw, Mich.
Keith Furnace Co., Des Moines, Iowa.
Lennox Furnace Co., Marshalltown, Iowa.
Majestic Co., Inc., Huntington, Ind.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Meyer Furnace Co., Peoria, Ill.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Heater Co., St. Paul, Minn.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Nugent Furnaces, Thos., New York, N. Y.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Portland Stove Foundry Co., Portland, Maine.
Premier Furnace Co., Dowagiac, Mich.
Quick Furnace & Supply Co., Des Moines, Iowa.
Radiant-Aire Corp., Michigan City, Ind.
Rosebraugh Co., W. W., Salem, Ore.
Round Oak Co., Inc., of Ind., Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Schill Mfg. Co., Crestline, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Souther Iron Co., E. E., St. Louis, Mo.
Stokol Stoker Co., Inc., Dayton, Ohio.
Supreme Gas Burner Mfg. Co., Holly, Mich.
Sure Comfort Furnace Co., Forest Park, Ill.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
Tri-State Heating Supply, Inc., Fort Wayne, Ind.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Westwick & Son, Inc., John, Galena, Ill.
Williamson Heater Co., Cincinnati, Ohio.
Worsham Co., Inc., Long Beach, Calif.

Electric

Gray & Dudley Co., Nashville, Tenn. (Floor)

Floor, Gas

Advance Furnace Co., Wichita, Kans.
Allied Heating & Air Conditioning Co., Lawndale, Calif.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Andrews Heater Co., Los Angeles, Calif.
Barnes Heating & Ventilating Co., Long Beach, Calif.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Benner-Nawman, Inc., Oakland, Calif.
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Central States Mfg. Co., Inc., Arkansas City, Kans.
Cole Hot Blast Mfg. Co., Chicago, Ill.
Coleman Co., Inc., Wichita, Kans.
Deluxe Furnace & Wall Heater Co., Los Angeles, Calif.
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
Empire Stove Co., Belleville, Ill.
Ford Blow Pipe & Mfg. Co., Memphis, Tenn.
Fraser & Johnston Co., San Francisco, Calif.
Gray & Dudley Co., Nashville, Tenn.
Hart-Mun Furnace Co., Tulsa, Okla.
Heating Equipment Mfg. Co., San Francisco, Calif.
Holly Mfg. Co., Pasadena, Calif.
Hotstream Heater Co., Cleveland, Ohio.
Hunt Heater Corp., Nashville, Tenn.
Ideal Heating Corp., Los Angeles, Calif.
International Sales Co., San Francisco, Calif.
Johnston Gas Furnace Corp., Ltd., North Hollywood, Calif.
King Metal Co., Oklahoma City, Okla.
Lawson Mfg. Co., Pittsburgh, Pa.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Mahl Mfg. Co., Huntington Park, Calif.
Meyer Furnace Co., Peoria, Ill.
Miller Floor Furnace Co., Oakland, Calif.
Moncrief Furnace & Mfg. Co., Inc., Dallas, Texas.
Mulkey Co., J. F., Detroit, Mich.
National Appliances, Inc., Pittsburgh, Pa.
Oran Co., Columbus, Ohio.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Perfection Stove Co., Cleveland, Ohio.
Queen Stove Works, Inc., Albert Lea, Minn.
Rheem Mfg. Co., New York, N. Y.
Samuel Stamping & Enameling Co., Chattanooga, Tenn.
Santa Clara Metal Products Co., Santa Clara, Calif.
Southwest Mfg. Co., Aurora, Mo.
Stephens Mfg. Co., Tulsa, Okla.
Sunshine Mantle Co., Chanute, Kans.
Surface Combustion Corp., Toledo, Ohio.
Temco, Inc., Nashville, Tenn.

Thermo-Products, Inc., North Judson, Ind.
Utility Appliance Corp., Los Angeles, Calif.
Viking Mfg. Corp., Cleveland, Ohio.
Ward Heater Co., Los Angeles, Calif.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Zink Co., John, Tulsa, Okla.

Floor, Oil

Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Auburn Burner Co., Auburn, Ind.
Benner-Nawman, Inc., Oakland, Calif.
Beyer Oil Burner Co., Rosamond, Calif.
Coleman Co. Inc., Wichita, Kans.
Delta Heating Corp., Trenton, N.J.
Domestic Mfg. Co., Seattle, Wash.
Evans Products Co., Plymouth, Mich.
Gillen Co., J. L., Detroit, Mich.
Kleer-Kleen Mfg. Co., Oakland, Calif.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Mulkey Co., J. F., Detroit, Mich.
Northwest Metal Products, Inc., Seattle, Wash.
Oran Co., Columbus, Ohio.
Queen Stove Works, Inc., Albert Lea, Minn.
Sequoia Mfg. Co., San Carlos, Calif.
Stoker-Lad Co., Tacoma, Wash.
Therm Oil Burner Co., Seattle, Wash.
Thermo-Products, Inc., North Judson, Ind.
United Air Heaters, Inc., Seattle, Wash.
U. S. Machine Corp., Lebanon, Ind.
Viking Mfg. Corp., Cleveland, Ohio.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.

Gas, Cast Iron

American Foundry & Furnace Co., Bloomington, Ill.
American Furnace Co., St. Louis, Mo.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Coroaire Heater Corp., Cleveland, Ohio.
Favorite Stove Co., Piqua, Ohio.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Henry Furnace Co., Medina, Ohio.
International Heater Co., Utica, N. Y.
Majestic Co., Inc., Huntington, Ind.
Marshall Furnace Co., Marshall, Mich.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Ryholt Heater Co., Ashland, Ohio.
Silver Flame, Inc., Detroit, Mich.
Sioux City Foundry & Boiler Co., Sioux City, Iowa.
Souther Iron Co., E. E., St. Louis, Mo.
Twin City Gas Specialty Co., Minneapolis, Minn.
Wise Furnace Co., Akron, Ohio.
XXth Century Heating & Ventilating Co., Akron, Ohio.

Gas, Steel

Advance Furnace Co., Wichita, Kans.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
Airwasher Corp., Eaton Rapids, Mich.
Aladdin Heating Corp., Oakland, Calif.
American Furnace Co., St. Louis, Mo.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Andrews Heating Co., Minneapolis, Minn.
Andrews-Schroeder Heating Co., Inc., Glendale, Calif.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Automatic Firing Corp., St. Louis, Mo.
Bard Mfg. Co., Bryan, Ohio.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa
Brown Steel Tank Co., Minneapolis, Minn.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Campbell Heating Co., Des Moines, Iowa.
Century Engineering Corp., Cedar Rapids, Iowa.
Coleman Co., Inc., Wichita, Kans.
Columbia Burner Co., Toledo, Ohio.
Conco Engineering Works, Mendota, Ill.
Consolidated Industries, Inc., Lafayette, Ind.
Dornback Furnace & Foundry Co., Cleveland, Ohio.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Evans Products Co., Plymouth, Mich.
Excelsior Stove Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Firewel Co., Inc., Buffalo, N.Y.
Floral City Heater Co., Monroe, Mich.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Fraser and Johnston Co., San Francisco, Calif.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Green Colonial Furnace Co., Des Moines, Iowa.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill.
Heating Specialties Co., Baltimore, Md. (Stainless)
Henry Furnace Co., Medina, Ohio.
Hess Co., Chicago, Ill.
Hess-Snyder Co., Massillon, Ohio.
Holly Mfg. Co., Pasadena, Calif.
Hotentot Co., Inc., Omaha, Nebr.
Independence Stove & Mfg. Co., Independence, Mo.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N. Y.
International Oil Burner Co., St. Louis, Mo.
International Sales Co., San Francisco, Calif.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Kleenair Furnace Co., Portland, Ore.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Leeson Air Cond. Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
Majestic Co., Inc., Huntington, Ind.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Meyer Furnace Co., Peoria, Ill.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Mulkey Co., J. F., Detroit, Mich.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Norman Products Co., Inc., Columbus, Ohio.
Nugent Furnaces, Thomas, New York, N. Y.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Oran Co., Columbus, Ohio.
Pacific Gas Heating Co., San Francisco, Calif.
Patten Co., J. V., Sycamore, Ill.
Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Perfection Stove Co., Cleveland, Ohio.
Radiant-Aire Corp., Michigan City, Ind.
Rapid Heat Corp., Detroit, Mich.
Rheem Mfg. Co., New York, N. Y.
Richmond Radiator Co., Aff. Reynolds Metals Co., New York, N. Y.
Round Oak Co., Inc. of Indiana, Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
Ryniker Steel Products Co., Billings, Mont.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Schill Mfg. Co., Crestline, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Souther Iron Co., E. E., St. Louis, Mo.
Stewart Co., W. H., Oklahoma City, Okla.
Stokol Stoker Co., Inc., Dayton, Ohio.
Superior Furnace & Mfg. Co., Plymouth, Mich.
Sure Comfort Furnace Co., Forest Park, Ill.
Surface Combustion Corp., Toledo, Ohio.
Thatcher Furnace Co., Garwood, N. J.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
United States Radiator Corp., Detroit, Mich.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Williams Oil-O-Matic Div., Eureka-Williams Corp., Bloomington, Ill.
Williamson Heater Co., Cincinnati, Ohio.

Oil, Cast Iron

American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
International Heater Co., Utica, N. Y.
Keith Furnace Co., Des Moines, Iowa.
Marshall Furnace Co., Marshall, Mich.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Sioux City Foundry & Boiler Co., Sioux City, Iowa.
XXth Century Heating & Ventilating Co., Akron, Ohio.

Oil, Steel

Airtemp Div., Chrysler Corp., Dayton, Ohio.
Airwasher Corp., Eaton Rapids, Mich.
American Furnace Co., St. Louis, Mo.

American Gas Machine Co., Albert Lea, Minn.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Anchor Div. Stratton & Terstegge Co., New Albany, Ind.
Andrews Heating Co., Minneapolis, Minn.
Arcweld Mfg. Co., Inc., Seattle, Wash.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Automatic Firing Corp., St. Louis, Mo.
Avery Farm Machinery Co., Hart Burner Dept., Peoria, Ill.
Bard Mfg. Co., Bryan, Ohio.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Beyer Oil Burner Co., Rosamond, Calif.
Bovee Furnace Works, Waterloo, Iowa.
Brown Steel Tank Co., Minneapolis, Minn.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div., Affil. Gas Equipment, Inc., Cleveland, Ohio.
Campbell Heating Co., Des Moines, Iowa.
Cary Mfg. Co., Waupaca, Wis.
Century Engineering Corp., Cedar Rapids, Iowa.
Certified Furnace Co., St. Paul, Minn.
Chandler Co., Cedar Rapids, Iowa.
Coleman Co., Inc., Wichita, Kans.
Conco Engineering Works, Mendota, Ill.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Consolidated Industries, Inc., Lafayette, Ind.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Delco Appliance Div. General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N.J.
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
Evans Products Co., Plymouth, Mich.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Floral City Heater Co., Monroe, Mich.
Forest City Foundries Co., Niagara Furnace Co., Cleveland, Ohio.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Furblo Co., Hermansville, Mich.
Gillen Co., J. L., Detroit, Mich.
Green Colonial Furnace Co., Des Moines, Iowa.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart & Crouse Corp., Oneida, N. Y.
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill.
Heating Specialties Co., Baltimore, Md. (Stainless)
Henry Furnace Co., Medina, Ohio.
Hess Co., Chicago, Ill.
Home Furnace Co., Holland, Mich.
Hotentot Co., Inc., Omaha, Nebr.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N.Y.
International Oil Burner Co., St. Louis, Mo.
Kaustine Co., Inc., Perry, N. Y.
Keith Furnace Co., Des Moines, Iowa.
Kleenair Furnace Co., Portland, Ore.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Leeson Air Cond. Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
McKee Furnace Co., Minneapolis, Minn.
Majestic Co., Inc., Huntington, Ind.
Metro Metal Mfg. Co., Holt, Mich.
Meyer Furnace Co., Peoria, Ill.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Montag Stove & Furnace Works, Portland, Ore.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Mulkey Co., J. F., Detroit, Mich.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Nugent Furnaces, Thomas, New York, N. Y.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Oran Co., Columbus, Ohio.
Patten Co., J. V., Sycamore, Ill.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Perfection Stove Co., Cleveland, Ohio.
Portland Stove Foundry Co., Portland, Maine.
Premier Furnace Co., Dowagiac, Mich.
Queen Stove Works, Inc., Albert Lea, Minn.
Quincy Stove Mfg. Co., Quincy, Ill.
Radiant-Aire Corp., Michigan City, Ind.
Rapid Heat Corp., Detroit, Mich.
Rosebraugh Co., W. W., Salem, Ore.
Round Oak Co., Inc. of Ind., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Schwab Furnace Co., Milwaukee, Wis.
Schwab Safe Co., Lafayette, Ind.
Souther Iron Co., E. E., St. Louis, Mo.
Stokol Stoker Co., Inc., Dayton, Ohio.
Superior Furnace & Mfg. Co., Plymouth, Mich.
Sure Comfort Furnace Co., Forest Park, Ill.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Williamson Heater Co., Cincinnati, Ohio.

Pipeless, Cast Iron

Agricola Furnace Co., Inc., Gadsden, Ala.
American Furnace Co., St. Louis, Mo.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Favorite Stove Co., Piqua, Ohio.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Gross-Aire Mfg. Co., St. Louis, Mo.
Henry Furnace Co., Medina, Ohio.
International Heater Co., Utica, N. Y.
Keith Furnace Co., Des Moines, Iowa.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Marshall Furnace Co., Marshall, Mich.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Olsen Mfg. Co., The C. A., Elyria, Ohio.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Portland Stove Foundry Co., Portland, Maine.
Rybolt Heater Co., Ashland, Ohio.
St. Clair Foundry Corp., Centralia, Ill.
Schill Mfg. Co., Crestline, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Souther Iron Co., E. E., St. Louis, Mo.
Spear Stove & Heater Co., James, Philadelphia, Pa.
Stiglitz Furnace & Foundry Co., Louisville, Ky.
United States Radiator Corp., Detroit, Mich.
Westwick & Son, Inc., John, Galena, Ill.
XXth Century Heating & Ventilating Co., Akron, Ohio.

Pipeless, Steel

American Radiator & Standard Sanitary Corp., Pittsburgh, Penn.
Andrews Heating Co., Minneapolis, Minn.
Armstrong Furnace Co., Columbus, Ohio.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hart & Crouse Corp., Oneida, N. Y.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N. Y.
Jackson & Church Co., Saginaw, Mich.
Keith Furnace Co., Des Moines, Iowa.
Lennox Furnace Co., Marshalltown, Iowa.
Montag Stove & Furnace Works, Portland, Ore.
Nugent Furnaces, Thos., New York, N. Y.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Rosebraugh Co., W. W., Salem, Ore.
Schill Mfg. Co., Crestline, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Stiglitz Furnace & Foundry Co., Louisville, Ky.
Thatcher Furnace Co., Garwood, N. J.
United States Radiator Corp., Detroit, Mich.
Waterman-Waterbury Co., Minneapolis, Minn.

Stoker, Cast Iron

American Foundry & Furnace Co., Bloomington, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Gross-Aire Mfg. Co., St. Louis, Mo.
Keith Furnace Co., Des Moines, Iowa.
Majestic Co., Inc., Huntington, Ind.
Marshall Furnace Co., Marshall, Mich.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.

Omaha Stove Repair Works, Inc., Omaha, Nebr.
Premier Furnace Co., Dowagiac, Mich.
Williamson Heater Co., Cincinnati, Ohio.

Stoker, Steel

American Furnace Co., St. Louis, Mo.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Andrews Heating Co., Minneapolis, Minn.
Arcweld Mfg. Co., Seattle, Wash.
Armstrong Furnace Co., Columbus, Ohio.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Campbell Heating Co., Des Moines, Iowa.
Certified Furnace Co., St. Paul, Minn.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Farquhar Furnace Co., Wilmington, Ohio.
Floral City Heater Co., Monroe, Mich.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Henry Furnace Co., Medina, Ohio.
Hess Co., Chicago, Ill.
Jackson & Church Co., Saginaw, Mich.
Keith Furnace Co., Des Moines, Iowa.
Lennox Furnace Co., Marshalltown, Iowa.
Majestic Co., Inc., Huntington, Ind.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Co., Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Northwest Foundry & Furnace Co., Portland, Ore.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Premier Furnace Co., Dowagiac, Mich.
Round Oak Co., Inc. of Ind., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Syncromatic Corp., Watertown, Wis.
Waterman-Waterbury Co., Minneapolis, Minn.
Williamson Heater Co., Cincinnati, Ohio.

Wall

A and B Mfg. Co., San Francisco, Calif. (LP, Nat. gas)
A. C. Co., Los Angeles, Calif. (Gas)
Andrews Heater Co., Los Angeles, Calif. (Gas)
Beyer Oil Burner Co., Rosamond, Calif. (Oil)
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio. (Gas)
Central States Mfg. Co., Inc., Arkansas City, Kans. (Gas)
Cirklair Products Div. Folsom Co., Inc., Dallas, Texas. (Gas)
Commonwealth Co., Alhambra, Calif.
Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
Delta Heating Corp., Trenton, N.J. (Oil)
Deluxe Furnace & Wall Heater Co., Los Angeles, Calif. (Gas)
Electromode Corp., Rochester, N. Y., (Electric)
Empire Stove Co., Belleville, Ill. (Gas)
Folsom Co., Inc., Dallas, Texas. (Gas)
General Gas Light Co., Kalamazoo, Mich. (Gas)
Hammel Radiator Engineering Co., Los Angeles, Calif. (Gas)
Heating Equipment Mfg. Co., San Francisco, Calif. (Gas)
Hirsh Mfg. Co., Garland, Texas. (Gas & electric)
Holly Mfg. Co., Pasadena, Calif. (Gas)
Hunt Heater Corp., Nashville, Tenn. (Gas)
Ideal Heating Corp., Los Angeles, Calif. (Gas)
International Sales Co., San Francisco, Calif. (Gas)
Kresky Mfg. Co., Inc., Petaluma, Calif. (Oil)
Lawson Mfg. Co., Pittsburgh, Pa. (Gas)
Lennox Furnace Co., Marshalltown, Iowa. (Gas)
Little Burner Co., Inc., H. C., San Rafael, Calif. (Oil)
Mahl Mfg. Co., Huntington Park, Calif. (Gas)
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich. (Gas)
Northwest Heating Inc., Portland, Ore.
Northwest Metal Products, Inc., Seattle, Wash.
Ohio Foundry & Mfg. Co., Steubenville, Ohio. (Gas)
O'Keefe & Merritt Co., Los Angeles, Calif. (Gas)
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
Pioneer Water Heater Corp., Los Angeles, Calif.
Quincy Stove Mfg. Co., Quincy, Ill.
Rheem Mfg. Co., New York, N. Y. (Gas)
Royal Heaters, Inc., Alhambra, Calif. (Gas)
Silent Sioux Corp., Orange City, Iowa. (Gas & oil)
Southwest Mfg. Co., Aurora, Mo. (Gas)
Stewart-Warner Corp., South Wind Div., Indianapolis, Ind. (Gas)
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif. (Electric)
Utility Appliance Corp., Los Angeles, Calif. (Gas)
Williams Radiator Co., Glendale, Calif. (Gas)
Zink Co., John, Tulsa, Okla. (Nat., L. P. & Mfg. Gas)

Wood Burning, Cast Iron

Excelsior Stove & Mfg. Co., Quincy, Ill.
Homer Furnace & Foundry Corp., Coldwater, Mich.
International Heater Co., Utica, N. Y.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Majestic Co., Inc., Huntington, Ind.
Moncrief Furnace & Mfg. Co., Dallas, Texas.
Montag Stove & Furnace Works, Portland, Ore.
Portland Stove Foundry Co., Portland, Maine.
Schwab Furnace Co., Milwaukee, Wis.

Wood Burning, Steel

Andrews Heating Co., Minneapolis, Minn.
Arcweld Mfg. Co., Inc., Seattle, Wash.
Bovee Furnace Works, Waterloo, Iowa.
Campbell Heating Co., Des Moines, Iowa.
Campbell Co., E. K., Kansas City, Mo.
Certified Furnace Co., St. Paul, Minn.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Furblo Co., Hermansville, Mich.
Gross-Aire Mfg. Co., St. Louis, Mo.
Jackson & Church Co., Saginaw, Mich.
Kleenair Furnace Co., Portland, Ore.
Lennox Furnace Co., Marshalltown, Iowa.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Moncrief Furnace & Mfg. Co., Dallas, Texas.
Montag Stove & Furnace Works, Portland, Ore.
National Heater Co., St. Paul, Minn.
Northwest Foundry & Furnace Co., Portland, Ore.
Nugent Furnaces, Thomas, New York, N. Y.
Rosebraugh Co., W. W., Salem, Ore.
Sandberg Mfg. Co., Portland, Ore. (Sawdust)
Syncromatic Corp., Watertown, Wis.
Worsham Co., Inc., Long Beach, Calif.

FURNACES, WINTER AIR CONDITIONING

Coal, Cast Iron

Agricola Furnace Co., Inc., Gadsden, Ala.
American Foundry & Furnace Co., Bloomington, Ill.
Baum Heating, Inc., J. H., Youngstown, Ohio.
Bovee Furnace Works, Waterloo, Iowa.
Chandler Co., Cedar Rapids, Iowa.
Crane Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farris Furnace Co., Springfield, Ill.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Green Colonial Furnace Co., Des Moines, Iowa.
Henry Furnace Co., Medina, Ohio.
Hess-Snyder Co., Massillon, Ohio.
Home Furnace Co., Holland, Mich.
Homer Furnace & Foundry Corp., Coldwater, Mich.
International Heater Co., Utica, N. Y.
Keith Furnace Co., Des Moines, Iowa.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Majestic Co., Inc., Huntington, Ind.
Marshall Furnace Co., Marshall, Mich.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Heater Co., St. Paul, Minn.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Premier Furnace Co., Dowagiac, Mich.
Round Oak Co., Inc. of Ind., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio.
Schill Mfg. Co., Crestline, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Skinner Heating & Vent. Co., St. Louis, Mo.
Souther Iron Co., E. E., St. Louis, Mo.
Spear Stove & Heater Co., James, Philadelphia, Pa.
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Union Mfg. Co., Inc., Boyertown, Pa.
United States Radiator Corp., Detroit, Mich.
Westwick & Son, Inc., John, Galena, Ill.
XXth Century Heating & Ventilating Co., Akron, Ohio.

Coal, Steel

American Furnace Co., St. Louis, Mo.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.

Andrews Heating Co., Minneapolis, Minn.
Arcweld Mfg. Co., Inc., Seattle, Wash.
Armstrong Furnace Co., Columbus, Ohio.
Bard Mfg. Co., Bryan, Ohio.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bovee Furnace Works, Waterloo, Iowa.
Campbell Heating Co., Des Moines, Iowa.
Campbell Co., E. K., Kansas City, Mo.
Certified Furnace Co., St. Paul, Mich.
Coal-O-Matic Co., Trucksville, Pa.
Crane Co., Chicago, Ill.
Deshler Foundry & Machine Works, Deshler, Ohio.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Electric Furnace-Man, Inc., Emmaus, Pa.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Floral City Heater Co., Monroe, Mich.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Furblo Co., Hermansville, Mich.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart & Crouse Corp., Oneida, N. Y.
Heatlox Furnaces, Inc., Tacoma, Wash.
Henry Furnace Co., Medina, Ohio.
Hess Co., Chicago, Ill.
Hess-Snyder Co., Massillon, Ohio.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N. Y.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Johnson Heater Corp., Chelsea, Mass.
Keith Furnace Co., Des Moines, Iowa.
Kleenair Furnace Co., Portland, Ore.
Leeson Air Conditioning Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Majestic Co., Inc., Huntington, Ind.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Meyer Furnace Co., Peoria, Ill.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Heater Co., St. Paul, Minn.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Portland Stove Foundry Co., Portland, Maine.
Premium Coal & Oil Co., Cincinnati, Ohio.
Radiant-Aire Corp., Michigan City, Ind.
Rosebraugh Co., W. W., Salem, Ore.
Round Oak Co., Inc., of Ind., Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Schill Mfg. Co., Crestline, Ohio.
Souther Iron Co., E. E., St. Louis, Mo.
Sure Comfort Furnace Co., Forest Park, Ill.
Synchromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
U.S. Machine Corp., Lebanon, Ind.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Westwick & Son, Inc., John, Galena, Ill.
Williamson Heater Co., Cincinnati, Ohio.
Worsham Co., Inc., Long Beach, Calif.

Electric

Electromode Corp., Rochester, N.Y.
Gray & Dudley Co., Nashville, Tenn. (basement, utility room)
Heating Assurance, Inc., Spokane, Wash.
Montag Stove & Furnace Works, Portland, Ore.
Northwest Heating, Inc., Portland, Ore.

Gas, Cast Iron

American Foundry & Furnace Co., Bloomington, Ill.
American Furnace Co., St. Louis, Mo.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Andrews Heating Co., Minneapolis, Minn.
Baum Heating, Inc., J. H., Youngstown, Ohio.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Coroaire Heater Corp., Cleveland, Ohio.
Evans Products Co., Plymouth, Mich.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Green Colonial Furnace Co., Des Moines, Iowa.
Henry Furnace Co., Medina, Ohio.
Hess-Snyder Co., Massillon, Ohio.
International Heater Co., Utica, N. Y.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Majestic Co., Inc., Huntington, Ind.
Marshall Furnace Co., Marshall, Mich.
Moncrief Furnace & Mfg. Co., Dallas, Tex.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Richmond Radiator Co., Aff. Reynolds Metals Co., New York, N. Y.
Rybolt Heater Co., Ashland, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Silver Flame Inc., Detroit, Mich.
Sioux City Foundry & Boiler Co., Sioux City, Iowa.
Souther Iron Co., E. E., St. Louis, Mo.
Surface Combustion Corp., Toledo, Ohio.
Thatcher Furnace Co., Garwood, N. J.
Twin City Gas Specialty Co., Minneapolis, Minn.
Viking Mfg. Corp., Cleveland, Ohio.
XXth Century Heating & Ventilating Co., Akron, Ohio.

Gas, Steel

Advance Furnace Co., Wichita, Kans.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
Airwasher Corp., Eaton Rapids, Mich.
Aladdin Heating Corp., Oakland, Calif.
Allan Engineering Co., Dallas, Texas.
American Furnace Co., St. Louis, Mo.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Andrews Heating Co., Minneapolis, Minn.
Andrews-Schroeder Heating Co., Glendale, Calif.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Auburn Foundry, Inc., Stoker, Div., Auburn, Ind.
Automatic Fizing Corp., St. Louis, Mo.
Bard Mfg. Co., Bryan, Ohio.
Baum Heating, Inc., J .H. Youngstown, Ohio.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Brandes Co., Madison, Wis.
Brown Steel Tank Co., Minneapolis, Minn.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div., Affil. Gas Equipment, Inc., Cleveland, Ohio.
Campbell Heating Co., Des Moines, Iowa.
Campbell Co., E. K., Kansas City, Mo.
Century Engineering Corp., Cedar Rapids, Iowa.
Certified Furnace Co., St. Paul, Minn.
Chimney-Furnace Corp., Rockville, Md. (Chimney)
Coleman Co., Inc., Wichita, Kans.
Columbia Specialty Co., Inc., Chevy Chase, Md.
Conco Engineering Works, Mendota, Ill.
Consolidated Industries, Inc, Lafayette, Ind.
Delco Appliance Div. General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N.J.
Dornback Furnace & Foundry Co., Cleveland, Ohio.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Dualtron Co., Pittsburgh, Pa. (Equipped with electrostatic filter)
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Firewel Co., Inc., Buffalo, N.Y.
Floral City Heater Co., Monroe, Mich.
Fluid Heat Div. Anchor Post Products, Inc., Baltimore, Md.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Fraser and Johnston Co., Div. Liberty Foundry Co., San Francisco, Calif.
Front Rank Furnace Co., St. Louis, Mo.
Gaul Air Conditioner Co., Dayton, Ohio.
General Automatic Products Corp., Baltimore, Md.
Gillen Co., J. L., Detroit, Mich.
Glasby Mfg. Co., Inc., J. P., Belleville, N. J.
Golden Gate Sheet Metal Works, Oakland, Calif.
Green Colonial Furnace Co., Des Moines, Iowa.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill.
Harvey-Whipple, Inc., Springfield, Mass.
Hays Furnace & Mfg. Co., Los Angeles, Calif. (Duct)

Heating Specialties Co., Baltimore, Md. (Stainless)
Heil Co., Milwaukee, Wis.
Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Henry Furnace Co., Medina, Ohio.
Hess Co., Chicago, Ill.
Hess-Snyder Co., Massillon, Ohio.
Holly Mfg. Co., Pasadena, Calif.
Hunt Heater Corp., Nashville, Tenn.
Huwer Heating Corp., Milford, Mich.
Independence Stove & Mfg. Co., Independence, Mo.
International Heater Co., Utica, N.Y.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Oil Burner Co., St. Louis, Mo.
International Sales Co., San Francisco, Calif.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Jet-Heet, Inc., Englewood, N. J.
Jettronaire, Inc., McKeesport, Pa.
Johnson Heater Corp., Chelsea, Mass.
Kaustine Co., Inc., Perry, N. Y.
Keith Furnace Co., Des Moines, Iowa.
Kleenair Furnace Co., Portland, Ore.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Leeson Air Conditioning Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
Majestic Co., Inc., Huntington, Ind.
Marietta Metal Products Corp., Philadelphia, Pa.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Metro Metal Mfg. Co., Holt, Mich.
Metromatic Mfg. Co., Everett, Mass.
Meyer Furnace Co., Peoria, Ill.
Moncrief Furnace Co., Atlanta, Ga.
Moncrief Furnace & Mfg. Co., Inc., Dallas, Texas.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Mulkey Co., J. F., Detroit, Mich.
National Heater Co., St. Paul, Minn.
Norge Heat Div., Borg-Warner Corp., Kalamazoo. Mich.
Norman Products Co., Inc., Columbus, Ohio.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Oran Co., Columbus, Ohio.
Pacific Gas Heating Co., San Francisco, Calif.
Patten Co., J. V., Sycamore, Ill.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Peerless Sales, Lincoln, Nebr.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Perfection Stove Co., Cleveland, Ohio.
Premier Furnace Co., Dowagiac, Mich.
Radiant-Aire Corp., Michigan City, Ind.
Radiation Furnace Corp., Benton Harbor, Mich.
Rapid Heat Corp., Detroit, Mich.
Reznor Mfg. Co., Mercer, Pa.
Rheem Mfg. Co., New York, N. Y.
Richmond Radiator Co., Affil. Reynolds Metals Co., New York, N. Y.
Roberts-Gordon Appliance Corp., Buffalo, N. Y.
Round Oak Co., Inc. of Ind., Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
Ryniker Steel Products Co., Billings, Mont.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Schill Mfg. Co., Crestline, Ohio.
Sequoia Mfg. Co., San Carlos, Calif.
Smith Corp., A. O., Milwaukee, Wis.
Souther Iron Co., E. E., St. Louis, Mo.
Southwest Mfg. Co., Aurora, Mo.
State Steel Products, Inc., Los Angeles, Calif.
Steel City Furnace Co., Springdale, Pa. (Equipped with electrostatic air filter optional)
Superior Furnace & Mfg. Co., Plymouth, Mich.
Sure Comfort Furnace Co., Forest Park, Ill.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tjernlund Mfg. Co., St. Paul, Minn.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
U.S. Machine Corp., Lebanon, Ind.
United States Radiator Corp., Detroit, Mich.
Utility Appliance Corp., Los Angeles, Calif.
Viking Mfg. Corp., Cleveland, Ohio.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Fort Wayne, Ind.
Williams Oil-O-Matic Div., Eureka-Williams Corp., Bloomington, Ill.
Williamson Heater Co., Cincinnati, Ohio.
York-Shipley, Inc., York, Pa.
Zick Sheet Metal Works, Dearborn, Mich.

Oil, Cast Iron

American Foundry & Furnace Co., Bloomington, Ill.
Baum Heating, Inc., J. H., Youngstown, Ohio.
International Heater Co., Utica, N. Y.
Keith Furnace Co., Des Moines, Iowa
Livingston, Inc., Marshall, Mich.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Majestic Co., Inc., Huntington, Ind.
Marshall Furnace Co., Marshall, Mich.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Portland Stove Foundry Co., Portland, Me.
Ruby Management Co., Pittsburgh, Pa.
Schwab Furnace Co., Milwaukee, Wis.
Westwick & Son, Inc., John, Galena, Ill.
XXth Century Heating & Ventilating Co., Akron, Ohio.

Oil, Steel

Air Conditioning Engineering Co., Cambridge, Mass.
Airwasher Corp., Eaton Rapids, Mich.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
American Furnace Co., St. Louis, Mo.
American Gas Machine Co., Albert Lea, Minn.
American Ideal-Aire Corp., Mineola, N. Y.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Anchor Div., Stratton & Tersteege Co., New Albany, Ind.
Andrews Heating Co., Minneapolis, Minn.
Arcweld Mfg. Co., Seattle, Wash.
Armstrong Furnace Co., Columbus, Ohio.
Associates Engineering Co., Buffalo, N. Y.
Auburn Burner Co., Auburn, Ind.
Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
Auto-Heat Corp., Middletown, Conn.
Automatic Firing Corp., St. Louis, Mo.
Bard Mfg. Co., Bryan, Ohio.
Baum Heating, Inc., J. H., Youngstown, Ohio.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Besser Metal Products Corp., Charlotte, N. C.
Bovee Furnace Works, Waterloo, Iowa.
Brandes Co., Madison, Wis.
Brenner & Co., Inc., Jacob, Fond du Lac, Wis.
Brown Steel Tank Co., Minneapolis, Minn.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Campbell Heating Co., Des Moines, Iowa.
Campbell Co., E. K., Kansas City, Mo.
Cary Mfg. Co., Waupaca, Wis.
Century Engineering Corp., Cedar Rapids, Iowa.
Certified Furnace Co., St. Paul, Minn.
Chandler Co., Cedar Rapids, Iowa.
Chicago Steel Furnace Co., Chicago, Ill.
Chimney-Furnace Corp., Rockville, Md.
Coal-O-Matic Co., Trucksville, Pa.
Coleman Co., Inc., Wichita, Kans.
Columbia Specialty Co., Inc., Chevy Chase, Md.
Conco Engineering Works, Mendota, Ill.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Consolidated Industries, Inc., Lafayette, Ind.
Cox Mfg. Co., Ridgeville, Ind.
Crane Co., Chicago, Ill.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N.J.
Demuth & Sons, Inc., Charles, Mineola, L. I., N. Y.
Deshler Foundry & Machine Works, Deshler, Ohio.
Domestic Mfg. Co., Seattle, Wash.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Dualtron Co., Pittsburgh, Pa. (Equipped with electrostatic filter)
Ducane Heating Corp., Lincoln Park, N. J.
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
Electric Furnace-Man, Inc., Emmaus, Pa.
Electrol Burner Mfg. Co., Inc., Rutherford, N. J.
Engineering Industries Co., Ltd., Toronto, Ont., Canada.
Enico Products, Detroit, Mich.
Evans Products Co., Plymouth, Mich.
Excelsior Stove & Mfg. Co., Quincy, Ill.

Farquhar Furnace Co., Wilmington, Ohio.
Fluid Heat Div. Anchor Post Products, Inc., Baltimore, Md.
Floral City Heater Co., Monroe, Mich.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Furblo Co., Hermanville, Mich.
General Automatic Products Corp., Baltimore, Md.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
General Oil Heating Corp., West New York, N. J.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
Gillen Co., J. L., Detroit, Mich.
Glasby Mfg. Co., Inc., J. P., Belleville, N. J.
Green Colonial Furnace Co., Des Moines, Iowa.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart & Crouse Corp., Oneida, N. Y.
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill.
Harvey-Whipple, Inc., Springfield, Mass.
Heating Specialties Co., Baltimore, Md. (Stainless).
Heatlox Furnaces, Inc., Tacoma, Wash.
Heil Co., Milwaukee, Wis.
Henry Furnace Co., Medina, Ohio.
Herco Oil Burner Corp., Lancaster, Pa.
Hershey Machine & Foundry Co., Manheim, Pa.
Hess Co., Chicago, Ill.
Hess-Snyder Co., Massillon, Ohio.
Home Furnace Co., Holland, Mich.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Hotentot Co., Inc., Omaha, Nebr.
Huwer Heating Corp., Milford, Mich.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N. Y.
International Oil Burner Co., St. Louis, Mo.
International Sales Co., San Francisco, Calif.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Jet-Heet, Inc., Englewood, N. J.
Jettronaire, Inc., McKeesport, Pa.
Johnson Co., S. T., Oakland, Calif., and Philadelphia, Pa.
Kaustine Co., Inc., Perry, N. Y.
Keith Furnace Co., Des Moines, Iowa.
Kleenair Furnace Co., Portland, Ore.
Kleer-Kleen Mfg. Co., Oakland, Calif.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Laco Oir Burner Co., Inc., Griswold, Iowa.
Leeson Air Conditioning Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
Luty Furnace Mfg. Co., Detroit, Mich.
McKee Furnace Co., Minneapolis, Minn.
McPherson Furnace & Supply Co., Portland, Ore.
Majestic Co., Inc., Huntington, Ind.
Marietta Metal Products Corp., Philadelphia, Pa.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Metro Metal Mfg. Co., Holt, Mich.
Metromatic Mfg. Co., Everett, Mass.
Meyer Furnace Co., Peoria, Ill.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Montag Stove & Furnace Works, Portland, Ore.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Mulkey Co., J. F., Detroit, Mich.
National Heater Co., St. Paul, Minn.
Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Pacific Gas Heating Co., San Francisco, Calif.
Paragon Oil Burner Corp., Brooklyn, N. Y.
Patten Co., J. V., Sycamore, Ill.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Peerless Sales, Lincoln, Nebr.
Perfection Stove Co., Cleveland, Ohio.
Petro Div., Iron Fireman Mfg. Co., Cleveland, Ohio.
Petroleum Heat & Power Co., Stamford, Conn.
Prat-Daniel Corp., South Norwalk, Conn.
Premier Furnace Co., Dowagiac, Mich.
Premium Coal & Oil Co., Cincinnati, Ohio.
Queen Stove Works, Inc., Albert Lea, Minn.
Quick Furnace & Supply Co., Des Moines, Iowa.
Quiet Automatic Burner Corp., Newark, N. J.
Radiant-Aire Corp., Michigan City, Ind.
Radiant Utilities Corp., Brooklyn, N. Y.
Radiation Furnace Corp., Benton Harbor, Mich.
Rapid Heat Corp., Detroit, Mich.
Ray Oil Burner Co., San Francisco, Calif.
Reif-Rexoil, Inc., Buffalo, N. Y.
Republic Products Co., Philadelphia, Pa.
Richmond Radiator Co., Affil. Reynolds Metals Co., New York, N. Y.
Rosebraugh Co., W. W., Salem, Ore.
Round Oak Co., Inc. of Ind., Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Schill Mfg. Co., Crestline, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Silent Sioux Corp., Orange City, Iowa.
Souther Iron Co., E. E., St. Louis, Mo.
Standard Arcoil Corp., Newark, N. J.
Standard Heating Equipment Co., Waterloo, Iowa.
Steel City Furnace Co., Springdale, Pa.
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Sundstrand Engineering Co., Rockford, Ill.
Superior Furnace & Mfg. Co., Plymouth, Mich.
Sure Comfort Furnace Co., Forest Park, Ill.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tjernlund Mfg. Co., St. Paul, Minn.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
Tru-Heet Co., Trenton, N. J.
Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
United Air Heaters, Inc., Seattle, Wash.
U.S. Machine Corp., Lebanon, Ind.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Waltham Oil Burner Co., E. Boston, Mass.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Weatherall Engineers, Inc., Providence, R. I.
Westwick & Son, Inc., John, Galena, Ill.
Williams Oil-O-Matic Div., Eureka Williams Corp., Bloomington, Ill.
Williamson Heater Co., Cincinnati, Ohio.
York-Shipley, Inc., York, Pa.
Zick Sheet Metal Works, Dearborn, Mich.

Stoker, Cast Iron

American Foundry & Furnace Co., Bloomington, Ill.
Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
Crane Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Gross-Air Mfg. Co., St. Louis, Mo.
Keith Furnace Co., Des Moines, Iowa.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Marshall Furnace Co., Marshall, Mich.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Stokol Stoker Co., Inc., Dayton, Ohio.
Williamson Heater Co., Cincinnati, Ohio.

Stoker, Steel

American Furnace Co., St. Louis, Mo.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Anchor Div., Straton & Terstegge Co., New Albany, Ind.
Andrews Heating Co., Minneapolis, Minn.
Arcweld Mfg. Co., Inc., Seattle, Wash.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Automatic Firing Corp., St. Louis, Mo.
Bard Mfg. Co., Bryan, Ohio.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Campbell Heating Co., Des Moines, Iowa.
Campbell Co., E. K., Kansas City, Mo.
Certified Furnace Co., St. Paul, Minn.
Chicago Steel Furnace Co., Chicago, Ill.
Crane Co., Chicago, Ill.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Deshler Foundry & Machine Works, Deshler, Ohio.
Electric Furnace-Man, Inc., Emmaus, Pa.
Farquhar Furnace Co., Wilmington, Ohio.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.

Furblo Co., Hermansville, Mich.
Gross-Air Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Heatlox Furnaces, Inc., Tacoma, Wash.
Hershey Machine & Foundry Co., Manheim, Pa.
Hess Co., Chicago, Ill.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Majestic Co., Inc., Huntington, Ind.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Heater Co., St. Paul, Minn.
Northwest Foundry & Furnace Co., Portland, Ore.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Rosebraugh Co., W. W., Salem, Ore.
Round Oak Co., Inc. of Ind., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Syncromatic Corp., Watertown, Wis.
Waterman-Waterbury Co., Minneapolis, Minn.
Williamson Heater Co., Cincinnati, Ohio.

Suspended Type

Air Conditioning Engineering Co., Cambridge, Mass. (Oil & gas)
Allan Engineering Co., Dallas, Texas.
American Furnace Co., St. Louis, Mo. (Gas & oil)
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Armstrong Furnace Co., Columbus, Ohio. (Oil)
Auburn Burner Co., Auburn, Ind. (Oil & gas)
Auburn Foundry, Inc., Stoker Div., Auburn, Ind. (Oil)
Automatic Gas Equipment Co., Pittsburgh, Pa. (Gas)
Barwick Mfg. Corp., Wichita, Kans. (Nat., mfg., & mixed)
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio. (Gas)
Chicago Steel Furnace Co., Chicago, Ill. (Oil & Gas)
Consolidated Industries, Inc., Lafayette, Ind.
Cox Mfg. Co., Ridgeville, Ind.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt. (Oil & gas)
Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
Delta Heating Corp., Trenton, N. J. (Oil & gas)
Fluid Heat Div., Anchor Post Products, Inc., Baltimore, Md. (Oil)
Fraser & Johnston Co., San Francisco, Calif.
General Electric Co., Air Conditioning Div., Bloomfield, N. J. (Gas)
General Gas Light Co., Kalamazoo, Mich. (Gas)
Gilbert & Barker Mfg. Co., West Springfield, Mass. (Oil)
Great National Air Conditioning Corp., Oklahoma City, Okla.
Hall-Neal Furnace Co., Indianapolis, Ind. (Oil)
Harvey-Whipple, Inc., Springfield, Mass. (Oil)
Hastings Air Cond. Co., Inc., Hastings, Nebr. (Gas)
Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Henry Furnace Co., Medina, Ohio.
International Sales Co., San Francisco, Calif. (Gas)
Jackson & Church Co., Saginaw, Mich. (Oil & gas)
Jet-Heet, Inc., Englewood, N. J. (Gas & Oil)
Johnson Heater Corp., Chelsea, Mass. (Oil)
Kaustine Co., Inc., Perry, N. Y. (Oil)
Lennox Furnace Co., Marshalltown, Iowa (Gas).
Little Burner Co., Inc., H. C., San Rafael, Calif. (Gas & oil)
McPherson Furnace & Supply Co., Portland, Ore. (Oil)
Meyer Furnace Company, Peoria, Ill. (Gas)
Montag Stove & Furnace Works, Portland, Ore. (Oil)
Mueller Furnace Co., L. J., Milwaukee, Wis. (Gas)
National Heater Co., St. Paul, Minn. (Oil & gas)
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich. (Gas & oil)
Northwest Foundry & Furnace Co., Portland, Ore. (Oil)
Norman Products Co., Inc., Columbus, Ohio. (Gas)
OverHead Heaters, Inc., Detroit, Mich. (Gas & oil)
Palmer Mfg. Corp., Phoenix, Ariz. (Gas)
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
Perfection Stove Co., Cleveland, Ohio. (Oil)
Petro Div., Iron Fireman Mfg. Co., Cleveland, Ohio. (Oil)
Prat-Daniel Corp., South Norwalk, Conn. (Gas & oil)
Quiet Automatic Burner Corp., Newark, N. J. (Oil)
Reznor Mfg. Co., Mercer, Pa. (Gas)
Rybolt Heater Co., Ashland, Ohio. (Gas & oil)
Sandberg Mfg. Co., Portland, Ore. (Oil)
Sequoia Mfg. Co., San Carlos, Calif.
Sonner Burner Co., Winfield, Kans. (Gas)
Stewart-Warner Corp., South Wind Div., Indianapolis, Ind. (Gas)
Surface Combustion Corp., Toledo, Ohio. (Gas)
Thatcher Furnace Co., Garwood, N. J. (Gas)
Tjernlund Mfg. Co., St. Paul, Minn. (Oil, gas)
Turb-O-Tube Furnace, Inc., Buffalo, N. Y. (Oil)
United States Radiator Corp., Detroit, Mich. (Gas, oil)
Waltham Oil Burner Co., E. Boston, Mass. (Oil)
Wayne Home Equipment Co., Inc., Fort Wayne, Ind. (Oil & gas)
Williams Oil-O-Matic Div. Eureka-Williams Corp., Bloomington, Ill. (Oil)
Zink Co., John, Tulsa, Okla. (Nat., L. P. & Mfg. Gas)

Utility Room, Coal, Steel

American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Bard Mfg. Co., Bryan, Ohio.
Consolidated Industries, Inc., Lafayette, Ind.
Hall-Neal Furnace Co., Indianapolis, Ind.
Jackson & Church Co., Saginaw, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Montag Stove & Furnace Works, Portland, Ore.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Round Oak Co., Inc., of Indiana, Dowagiac, Mich.
Smith Heater Co., Peter, Dearborn, Mich.
Souther Iron Co., E. E., St. Louis, Mo.

Utility Room, Gas, Cast Iron

American Foundry & Furnace Co., Bloomington, Ill.
American-Standard, Pittsburgh, Pa.
Coroaire Heater Corp., Cleveland, Ohio.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Henry Furnace Co., Medina, Ohio.
International Oil Burner Co., St. Louis, Mo.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Richmond Radiator Co., Aff. Reynolds Metals Co., New York, N. Y.
Rybolt Heater Co., Ashland, Ohio.
Silver Flame, Inc., Detroit, Mich.
Souther Iron Co., E. E., St. Louis, Mo.
Surface Combustion Corp., Toledo, Ohio.
Twin City Gas Specialty Co., Minneapolis, Minn.

Utility Room, Gas, Steel

Advance Furnace Co., Wichita, Kans.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
Aladdin Heating Corp., Oakland, Calif.
American Furnace Co., St. Louis, Mo.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Bard Mfg. Co., Bryan, Ohio.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Brandes Co., Madison, Wis.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Century Engineering Corp., Cedar Rapids, Iowa.
Certified Furnace Co., Div. Stainless & Steel Products Co., St. Paul, Minn.
Coleman Co., Inc., Wichita, Kans.
Conco Engineering Works, Mendota, Ill.
Consolidated Industries, Inc., Lafayette, Ind.
Dalzen Mfg. Co., St. Clair, Mich.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N.J.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Evans Products Co., Plymouth, Mich.
Farquhar Furnace Co., Wilmington, Ohio.
Firewel Co., Inc., Buffalo, N.Y.
Floral City Heater Co., Monroe, Mich.
Fluid Heat Div. Anchor Post Products, Inc., Baltimore, Md.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Fraser & Johnston Co., San Francisco, Calif.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
General Gas Light Co., Kalamazoo, Mich.
Gladsby Mfg. Co., Inc., J. P., Belleville, N. J.
Golden Gate Sheet Metal Works, Oakland, Calif.
Green Colonial Furnace Co., Des Moines, Iowa.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill.
Heating Equipment Mfg. Co., San Francisco, Calif.
Heating Specialties Co., Baltimore, Md.
Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Henry Furnace Co., Medina, Ohio.
Hess Co., Chicago, Ill.
Hunt Heater Corp., Nashville, Tenn.
Huwer Heating Corp., Milford, Mich.

Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N.Y.
International Sales Co., San Francisco, Calif.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Jet-Heet, Inc., Englewood, N. J.
Jettronaire, Inc., McKeesport, Pa.
Kaustine Co., Inc., Perry, N. Y.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Leeson Air Conditioning Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
Majestic Co., Inc., Huntington, Ind.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Meyer Furnace Co., Peoria, Ill.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Norman Products Co., Inc., Columbus, Ohio.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Pacific Gas Heating Co., San Francisco, Calif.
Palmer Mfg. Corp., Phoenix, Ariz.
Patten Co., J. V., Sycamore, Ill.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Peerless Sales, Lincoln, Nebr.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Perfection Stove Co., Cleveland, Ohio.
Premier Furnace Co., Dowagiac, Mich.
Radiant-Aire Corp., Michigan City, Ind.
Radiation Furnace Corp., Benton Harbor, Mich.
Reznor Mfg. Co., Mercer, Pa.
Rheem Mfg. Co., New York, N. Y.
Richmond Radiator Co., Aff. Reynolds Metals Co., New York, N. Y.
Round Oak Co. of Indiana, Dowagiac, Mich.
Royal Heaters, Inc., Alhambra, Calif.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Scott-Newcomb, Inc., St. Louis, Mo.
Sequoia Mfg. Co., San Carlos, Calif.
Souther Iron Co., E. E., St. Louis, Mo.
Steel City Furnace Co., Springdale, Pa.
Stokol Stoker Co., Inc., Dayton, Ohio.
Sure Comfort Furnace Co., Forest Park, Ill.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N.J.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Toridheet Div. Cleveland Steel Products Corp., Cleveland, Ohio.
Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
United States Radiator Corp., Detroit, Mich.
Utility Appliance Corp., Los Angeles, Calif.
Viking Mfg. Corp., Cleveland, Ohio.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Williamson Heater Co., Cincinnati, Ohio.
York-Shipley, Inc., York, Pa.

Utility Room, Oil, Steel

Airtemp Div., Chrysler Corp., Dayton, Ohio.
American Furnace Co., St. Louis, Mo.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Armstrong Furnace Co., Columbus, Ohio.
Anchor Div. Stratton & Terstegge Co., New Albany, Ind.
Auburn Burner Co., Auburn, Ind.
Bard Mfg. Co., Bryan, Ohio.
Benner-Nawman, Inc., Oakland, Calif.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Brandes Co., Madison, Wis.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Calimode, Inc., Atlanta, Ga.
Cary Mfg. Co., Waupaca, Wis.
Century Engineering Corp., Cedar Rapids, Iowa.
Certified Furnace Co., Div. Stainless & Steel Products Co., St. Paul, Minn.
Coleman Co., Inc., Wichita, Kans.
Conco Engineering Works, Mendota, Ill.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Consolidated Industries, Inc., Lafayette, Ind.
Crane Co., Chicago, Ill.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N.J.
Domestic Mfg. Co., Seattle, Wash.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Ducane Heating Corp., Lincoln Park, N. J.
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
Engineering Industries Co., Ltd., Toronto, Ont., Canada.
Enico Products, Detroit, Mich.
Evans Products Co., Plymouth, Mich.
Farquhar Furnace Co., Wilmington, Ohio.
Firewel Co., Inc., Buffalo, N.Y.
Floral City Heater Co., Monroe, Mich.
Fluid Heat Div. Anchor Post Products, Inc., Baltimore, Md.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
Gillen Co., J. L., Detroit, Mich.
Green Colonial Furnace Co., Des Moines, Iowa.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill.
Harvey-Whipple, Inc., Springfield, Mass.
Heating Specialties Co., Baltimore, Md.
Henry Furnace Co., Medina, Ohio.
Hess Co., Chicago, Ill.
Huwer Heating Corp., Milford, Mich.
International Heater Co., Utica, N.Y.
International Oil Burner Co., St. Louis, Mo.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Jet-Heet, Inc., Englewood, N. J.
Jettronaire, Inc., McKeesport, Pa.
Kaustine Co., Inc., Perry, N.Y.
Kleer-Kleen Mfg. Co., Oakland, Calif.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Kresky Mfg. Co., Petaluma, Calif.
Laco Oil Burner Co., Inc., Griswold, Iowa.
Leeson Air Conditioning Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
McPherson Furnace & Supply Co., Portland, Ore.
Majestic Co., Inc., Huntington, Ind.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Metro Metal Mfg. Co., Holt, Mich.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Northwest Metal Products, Inc., Seattle, Wash.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Paragon Oil Burner Corp., Brooklyn, N. Y.
Patten Co., J. V., Sycamore, Ill.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Perfection Stove Co., Cleveland, Ohio.
Petro Div., Iron Fireman Mfg. Co., Cleveland, Ohio.
Premier Furnace Co., Dowagiac, Mich.
Radiant-Aire Corp., Michigan City, Ind.
Radiation Furnace Corp., Benton Harbor, Mich.
Richmond Radiator Co., New York, N. Y.
Round Oak Co., Inc., of Indiana, Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Scott-Newcomb, Inc., St. Louis, Mo.
Silent Sioux Corp., Orange City, Iowa.
Souther Iron Co., E. E., St. Louis, Mo.
Steel City Furnace Co., Springdale, Pa.
Stokol Stoker Co., Inc., Dayton, Ohio.
Sure Comfort Furnace Co., Forest Park, Ill.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N.J.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tjernlund Mfg. Co., St. Paul, Minn.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Waltham Oil Burner Co., E. Boston, Mass.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Weatherall Engineers, Inc., Providence, R. I.

Williams Oil-O-Matic Div., Eureka-Williams Corp., Bloomington, Ill.
Williamson Heater Co., Cincinnati, Ohio.
York-Shipley, Inc., York, Pa.

500,000 Btu and up

Air Conditioning Engineering Co., Cambridge, Mass. (Oil, gas, or stoker)
Air Devices, Inc., New York, N. Y. (Gas)
Airtherm Mfg. Co., St. Louis, Mo. (Gas-oil)
American Foundry & Furnace Co., Bloomington, Ill. (Coal, oil, gas)
American Furnace Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Armstrong Furnace Co., Columbus, Ohio. (Coal)
Bard Mfg. Co., Bryan, Ohio. (Oil)
Beck Engineering Combustion Kompany, St. Louis, Mo. (Coal, oil & gas)
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Calimode, Inc., Atlanta, Ga. (Oil)
Campbell Heating Co., Des Moines, Iowa. (Gas, oil & coal)
Campbell Co., E. K., Kansas City, Mo.
Certified Furnace Co., Div. Stainless & Steel Products Co., St. Paul, Minn.
Chicago Steel Furnace Co., Chicago, Ill. (Gas & oil)
Columbus Heating & Ventilating Co., Columbus, Ohio.
Cyclotherm Div., U. S. Radiator Corp., Oswego, N. Y. (Gas & oil)
Demuth & Sons, Inc., Charles, Mineola, L. I. N. Y. (Oil)
Dravo Corp., Pittsburgh, Pa. (Oil, gas)
Favorite Stove Co., Piqua, Ohio. (Coal)
Floral City Heater Co., Monroe, Mich. (Coal)
Hall-Neal Furnace Co., Indianapolis, Ind.
International Sales Co., San Francisco, Calif. (Gas & oil)
Jackson & Church Co., Saginaw, Mich. (Coal, oil & gas)
Johnson Heater Corp., Chelsea, Mass. (Oil, gas, coal)
Keith Furnace Co., Des Moines, Iowa. (Oil)
Lee Corporation, Wilmington, Del. (Hand & stoker-oil, gas, comb. oil-gas)
Lennox Furnace Co., Marshalltown, Iowa. (Gas, oil, and coal)
MaGirl Foundry & Furnace Co., Bloomington, Ill. (Gas, oil, coal).
Majestic Co., Inc., Huntington, Ind. (Oil & gas)
McPherson Furnace & Supply Co., Portland, Ore. (Oil & Coal)
Meyer Furnace Co., Peoria, Ill. (Coal, oil & gas)
Montag Stove & Furnace Works, Portland, Ore. (Oil)
Mueller Furnace Co., L. J., Milwaukee, Wis. (Coal, oil & gas)
National Heater Co., St. Paul, Minn. (Coal, oil, gas; gas-oil comb.)
Northwest Foundry & Furnace Co., Portland, Ore. (Coal & oil)
Norwalk Air Conditioning Corp., South Norwalk, Conn. (Oil)
Olson & Co., Arthur A., Canfield, Ohio. (Oil, gas, stoker, comb.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Pennsylvania Furnace & Iron Co., Warren, Pa. (Gas)
Prat-Daniel Corp., South Norwalk, Conn. (Gas-oil)
Rosebraugh Co., W. W., Salem, Ore. (Oil, wood & saw dust)
Round Oak Co., Inc., of Indiana, Dowagiac, Mich. (Coal, gas, & oil)
St. Louis Furnace Mfg. Co., St. Louis, Mo. (Coal, gas & oil)
Sandberg Mfg. Co., Portland, Ore. (Coal & oil)
Surface Combustion Corp., Toledo, Ohio. (Gas)
Syncromatic Corp., Watertown, Wis. (Oil, coal, gas)
Tjernlund Mfg. Co., St. Paul, Minn. (Oil, gas)
Vacuum Gas Appliances, Div. Union Fork & Hoe Co., Rome,
Weatherall Engineers, Inc., Providence, R. I.

GALVANIZED SHEETS

See Sheets, Metal, Galvanized

GAS BURNERS

See Burners, Gas

GAS BURNER CONTROLS

See Controls; Control Systems

GATES, BLAST

Berger Bros. Co., Philadelphia, Pa.
Buffalo Forge Co., Buffalo, N. Y.
Champion Blower & Forge Co., Lancaster, Pa.
Clarage Fan Co., Kalamazoo, Mich.
Day Co., Minneapolis, Minn.
Eclipse Fuel Engineering Co., Rockford, Ill.
Goethel Sheet Metal Works, Inc., Alfred, Milwaukee, Wis.
Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Maysteel Products, Inc., Milwaukee, Wis.
Newcomb-Detroit Co., Detroit, Mich.
Puhl & Hepper Mfg. Co., Inc., St. Louis, Mo.
R-S Products Corp., Philadelphia, Pa.
Rees Blow Pipe Mfg. Co., Inc., San Francisco, Calif.
Skinner Heating & Ventilating Co., St. Louis, Mo.
Spencer Turbine Co., Hartford, Conn.
Western Blower Co., Seattle, Wash.
Winkler & Sons, Inc., A. E., Milwaukee, Wis.

GAUGES, DRAFT, INDICATING, PORTABLE

Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Bristol Co., Waterbury, Conn.
Defender Instrument & Regulator Co., St. Louis, Mo.
Detroit Air Conditioning Service Co., Nashville, Mich.
Dwyer Mfg. Co., F. W., Chicago, Ill.
Ellison Draft Gage Co., Chicago, Ill.
Foxboro Co., Foxboro, Mass.
Hays Corp., Michigan City, Ind.
Hill & Co., E. Vernon, Chicago, Ill.
Meriam Instrument Co., Cleveland, Ohio.
Moeller Instrument Co., Richmond Hill, N. Y.
Perfex Corp., Milwaukee, Wis.
Precision Thermometer & Instrument Co., Philadelphia, Pa.
Preferred Utilities Mfg. Corp., New York, N. Y.
Uehling Instrument Co., Paterson, N. J.

GAUGES, TANK, FUEL OIL

Applied Mechanics Co., Boston, Mass.
Barclay Co., Robt., Chicago, Ill.
Bearlee Products Co., Green Bay, Wis.
Boston Machine Works Co., Lynn, Mass.
Hasko Utiliites Co., New York, N. Y.
Jessup Signal Gauge Co., Minneapolis, Minn.
Krueger Sentry Gauge Co., Green Bay, Wis.
Liquidepth Indicators, Inc., Long Island City, N. Y.
Liquidometer Corp., Long Island City, N. Y.
Mel-Gauge Co., New Haven, Conn.
Morse-Smith-Morse, Inc., Watertown, Mass.
Oil Equipment Mfg. Co., New Haven, Conn.
Petrometer Corp., Long Island City, N. Y.
Rochester Mfg. Co., Inc., Rochester, N.Y.
Scully Signal Co., Cambridge, Mass.
Uehling Instrument Co., Paterson, N. J.

GERMICIDAL APPARATUS

See Air Sterilizers

GLASS, WIRE, FOR SKYLIGHTS

Atcheson Glass Co., T. J., Buffalo, N. Y.
Bache & Co., Semon, New York, N. Y.
Libbey-Owens-Ford Glass Co., Toledo, Ohio.
Pennsylvania Wire Glass Co., Philadelphia, Pa. (Corrugated wire)
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Robertson Co., H. H., Pittsburgh, Pa.

GRAVITY FURNACES

See Furnaces, Warm Air, Gravity

GREASE FILTERS

See Filters, Grease

GRILLES, HEATING, VENTILATING AND AIR CONDITIONING

Also See Faces and Registers

A & A Register Co., Cleveland, Ohio.
A-J Mfg. Co., Kansas City, Mo.
Acme Wire & Iron Works, Detroit, Mich.
Air Control Products, Inc., Coopersville, Mich.
Alton Mfg. Co., Dallas, Texas.
American Foundry & Furnace Co., Bloomington, Ill.
American Warming & Ventilating Co., Toledo, Ohio.
Auer Register Co., Cleveland, Ohio.
Barber-Colman Co., Rockford, Ill.
Beckley Perforating Co., Garwood, N. J.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Best Register Co., Milwaukee, Wis.
Controlair Mfg. Co., Los Angeles, Calif.
Cross Engineering Co., Carbondale, Pa.
Diamond Mfg. Co., Wyoming, Pa.
Erdle Perforating Co., Rochester, N. Y.
Greenberg's Sons, M., San Francisco, Calif.
Harrington & King Perforating Co., Chicago, Ill.
Harrison Sheet Steel Co., Chicago, Ill.

Hart & Cooley Mfg. Co., Holland, Mich.
Hastings Air Cond. Co., Inc., Hastings, Nebr.
Hendrick Mfg. Co., Carbondale, Pa.
Independent Register Co., Cleveland, Ohio.
Johnston & Chapman Co., Chicago, Ill.
Juniper Elbow Co., Inc., Middle Village, L. I., N. Y.
Krueger Air Conditioning Co., Tucson, Ariz.
Lima Register Co., Lima, Ohio.
Louvra Corp., Union, N.J.
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
Metal Carrier Corp., Grand Rapids, Mich.
Midco Register Corp., St. Paul, Minn.
Mundt & Sons, Charles, Jersey City, N. J.
Patco Mfg. Co., Philadelphia, Pa.
Radiant-Aire Corp., Michigan City, Ind.
Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Rock Island Register Co., Rock Island, Ill.
Smith Co., J. B., Philadelphia, Pa.
Stewart Mfg. Co., Cedar Grove, N. J.
Titus, Inc., Waterloo, Iowa.
Titus Mfg. Corp., Waterloo, Iowa.
Tuttle & Bailey, Inc., New Britain, Conn.
U.S. Air Conditioning Corp., Minneapolis, Minn.
U. S. Radiator Corp., Detroit, Mich.
United States Register Co., Battle Creek, Mich.
Wilde Register & Grille Co., Detroit, Mich.

GRINDERS, BUFFERS, POLISHERS AND SANDERS

See Buffers, Grinders, Polishers and Sanders

GROOVING MACHINES

See Machines, Grooving

GUARDS, SNOW

Barnard Co., Geo. A., Worcester, Mass.
Berger Bros. Co., Philadelphia, Pa.
Cartier & Sons Co., M. N., Providence, R. I.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cromley's, Lewisburg, Pa. (For slate & standing seam roofs)
Danzer Metal Works Co., Hagerstown, Md. (All types).
Downs-Smith Brass & Copper Co., New York, N. Y.
Folsom Snow Guard Co., Millis, Mass.
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Levow, David, New York, N. Y.
Maysteel Products, Inc., Milwaukee, Wis.
Obdyke, Inc., Philadelphia, Pa.
Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.

GUNS

Rivet

Chicago Pneumatic Tool Co., New York, N. Y.
Huck Mfg. Co., Detroit, Mich. (Blind rivet)
Ramset Fasteners, Inc., Cleveland, Ohio.
Remington Arms Co., Inc., Bridgeport, Conn.
Townsend Co., Cherry Rivet Div., Santa Ana, Calif. (Blind rivet)

Soot

Miller Products Co., Lansing, Mich.
S. O. S. Products Co., Inc., Brooklyn, N. Y.

Spray, Metal

Schori Process, Div. Ferro-Co Corp., Long Island City, N. Y.
Wall Colmonoy Corp., Detroit, Mich.

Spray, Paint

Binks Mfg. Co., Chicago, Ill.
Black Mfg. Co., Harrison, N. J.
Champion Implement Corp., New York, N. Y.
DeVilbiss Co., Toledo, Ohio.
Eclipse Air Brush Co., Newark, N. J.
Electric Sprayit Co., Sheboygan, Wis.
Electro Dustless Painting, Inc., Elmwood, Conn.
Plummer Spray Equipment Co., Napoleon, Ohio.
Portable Electric Tools, Inc., Chicago, Ill.
Spray Engineering Co., Somerville, Mass.

GUTTER FORMERS

See Machines, Gutter Forming

GUTTER FITTINGS AND ACCESSORIES

See Fittings and Accessories, Gutter

GUTTERS

Ajax Furnace Fittings Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
Alabama Metal Lath Co., Birmingham, Ala. (Steel & copper)
Barnes Metal Products Co., Chicago, Ill.
Bayonne Steel Products Co., Newark, N. J.
Berger Bros. Co., Philadelphia, Pa.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Cheney Flashing Co., Trenton, N. J.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Enderle Inc., Ltd., Frank X., Los Angeles, Calif. (Galvanized & copper)
Harrison Steel Cabinet Co., Chicago, Ill. (Alum.)
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Inland Steel Products Co., Milwaukee, Wis. (Galvanized & copper)
Klauer Mfg. Co., Dubuque, Iowa.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis. (Galvanized steel)
Lamb & Ritchie Co., Cambridge, Mass. (Galvanized & copper)
Lyon, Conklin & Co., Inc., Baltimore, Md.
Matthiessen & Hegeler Zinc Co., LaSalle, Ill. (Zinc)
Miller & Doing, Brooklyn, N. Y.
New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
Newport Steel Corp., Newport, Ky.
Northwest Metal Products, Inc., Seattle, Wash. (Galv. & copper)
Obdyke, Inc., B. P., Philadelphia, Pa. (Copper, galv. & stainless steel)
Overly Mfg. Co., Greensburg, Pa. (Copper & aluminum)
Penn Supply & Metal Corp., Philadelphia, Pa. (Galvanized, copper & aluminum)
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Reeves Steel & Mfg. Co., Dover, Ohio. (Galvanized steel)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Riggin Metal Products, Kankakee, Ill.
Ryniker Steel Products Co., Billings, Mont.
St. Paul Corrugating Co., St. Paul, Minn. (Galvanized steel)
Schecter Bros. Co., Philadelphia, Pa. (Galvanized & copper)
Schoedinger, F. O., Columbus, Ohio. (Galvanized, stainless steel & copper)
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y. (Galv. & copper)
Sheet Metal Products Co., Peoria, Ill.
Sioux Steel Co., Sioux Falls, S. Dak. (Galv. & copper)
Southbridge Roofing Co., Inc., Southbridge, Mass. (Galv. & copper)
Souther Iron Co., E. E., St. Louis, Mo. (Galv.)
Southern States Iron Roofing Co., Savannah, Ga. (Galvanized steel & copper)
Standard Furnace Supply Co., Omaha, Nebr. (Galv.)
Superior Safety Furnace Pipe Co., Detroit, Mich.
Thor Metal Products Co., Inc., Syracuse, N. Y. (Galv. & copper)
Tiffin Art Metal Co., Tiffin, Ohio (Aluminum, stainless steel, copper & galv.)
Van Noorden Co., E., Boston, Mass.
Wheeling Corrugating Co., Wheeling, W. Va. (Galvanized steel)
Wallace Co., William, Metalbestos Div., Belmont, Calif. (Galvanized & copper)
York Corrugating Co., York, Pa. (Galvanized & copper)

HAMMERS, POWER

American Pneumatic Tool Co., New York, N. Y. (Pneumatic)
Black & Decker Mfg. Co., Towson, Md. (Electric)
Borm Mfg. Co., Elgin, Ill. (Pneumatic)
Chicago Pneumatic Tool Co., New York, N. Y.
Independent Pneumatic Tool Co., Aurora, Ill. (Electric & pneumatic)
Keller Tool Co., Grand Haven, Mich. (Pneumatic)
Millers Falls Co., Greenfield, Mass. (Electric)
Nobel & Stanton, Inc., Bedford, Ohio. (Electric)
Phillips Drill Co., Chicago, Ill. (Electric)
Powder Power Tool Corp., Portland, Ore. (Powder charged)
Rotor Tool Co., Cleveland, Ohio. (Pneumatic)
Skil Corporation, Chicago, Ill. (Electric & pneumatic)
Stanley Electric Tool Div., Stanley Works, New Britain, Conn. (Electric)
Superior Pneumatic & Mfg., Inc., Cleveland, Ohio. (Pneumatic)
Syntron Co., Homer City, Pa. (Electric)
Van Products Co., Erie, Pa. (Pneumatic-foot controlled)
Whiting Corp., Harvey, Ill. (Electric)
Wodack Electric Tool Corp., Chicago, Ill. (Electric)

HAND SHEARS

See Tools, Sheet Metal Workers

HANGERS AND SUPPORTS, DUCT

See Fastenings, Sheet Metal

HARDWARE, FOR CABINETS AND CASINGS

(Handles, name plates, etc.)

American Cabinet Hardware Corp., Rockford, Ill. (Pulls, knobs, hinges, catches, etc.)
American Insulator Corp., New Freedom, Pa.
Corbin Div., P. & F., American Hardware Corp., New Britain, Conn. (Handles, catches, locks, hinges)
Etched Products Co., Long Island City, N. Y. (Name Plates)
Fisher Brass Foundry, Los Angeles, Calif. (Handles)
Greenberg's Sons, M., San Francisco, Calif. (Name plates, letters, hinges, bolts, latches)
Moss Industries, Inc., Brooklyn, N. Y.
National Lock Co., Rockford, Ill.
Premier Metal Etching Co., Long Island City, N. Y. (Name plates)
Soss Mfg. Co., Detroit, Mich. (Invisible hinges)

HEAT PUMPS

See Air Conditioning Units, Central Plant, Summer-Winter

HEATERS, DIRECT FIRED

See Furnaces

HEATERS, SCHOOL ROOM

Agricola Furnace Co., Inc., Gadsden, Ala.
Air Conditioning Engineering Co., Cambridge, Mass. (Oil)
Andrews Heating Co., Minneapolis, Minn.
Campbell Heating Co., Des Moines, Iowa.
Chicago Steel Furnace Co., Chicago, Ill. (Gas & oil)
Electriglas Corp., Bergenfield, N. J. (Electric)
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt. (Wood)
Dravo Corp., Pittsburgh, Pa. (Gas & oil)
Excelsior Stove & Mfg. Co., Quincy, Ill. (Coal)
Green Colonial Furnace Co., Des Moines, Iowa. (Coal)
Hart & Crouse Corp., Oneida, N. Y.
Henry Furnace Co., Medina, Ohio.
Hess-Snyder Co., Massillon, Ohio.
Home Furnace Co., Holland, Mich. (Coal)
Homer Furnace & Foundry Corp., Coldwater, Mich.
Keith Furnace Co., Des Moines, Iowa.
MaGirl Foundry & Furnace Co., Bloomington, Ill. (Coal, oil & gas)
Marshall Furnace Co., Marshall, Mich. (Coal)
Meyer Furnace Co., Peoria, Ill. (Coal)
Mueller Furnace Co., L. J., Milwaukee, Wis. (Gas & oil)
Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Perfection Stove Co., Cleveland, Ohio. (Oil & gas)
Pittston Stove Co., Pittson, Pa
Portland Stove Foundry Co., Portland, Maine.
Premier Furnace Co., Dowagiac, Mich. (Oil, gas & coal)
St. Clair Foundry Corp., Centralia, Ill.
Surface Combustion Corp., Toledo, Ohio. (Gas)
Temco, Inc., Nashville, Tenn. (Gas)
XXth Century Heating & Ventilating Co., Akron, Ohio. (Coal)

HEATERS, SPACE, CABINET TYPE

Acme Electric Heating Co., Boston, Mass. (Electric)
Adams Bros. Mfg. Co., Inc., Pittsburgh, Pa. (Gas)
Agricola Furnace Co., Inc., Gadsden, Ala. (Coal)
Allen Mfg. Co., Inc., Nashville, Tenn. (Oil)
American Gas Machine Co., Albert Lea, Minn. (Oil & gas)
Andrews Heating Co., Minneapolis, Minn. (Coal and Oil)
Armstrong Products Corp., Huntington, W. Va. (Gas & electric)
B & C Metal Stamping Co., Atlanta, Ga. (Nat., Mfg., LP)
Beyer Oil Burner Co., Rosamond, Calif. (Oil)
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio. (All gases)
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Electric)
Chattanooga Implement & Mfg. Co., Chattanooga, Tenn. (gas)
Cirklair Products Div., Folsom Co., Inc., Dallas, Texas. (Gas)
Cole Hot Blast Mfg. Co., Chicago, Ill. (Coal, Oil, Gas, Wood)
Coleman Co., Inc., Wichita, Kans. (Oil & gas)
Coroaire Heater Corp., Cleveland, Ohio. (Mfg. & mixed gases)
Davison, Inc., Frank D., Los Angeles, Calif. (Gas)
Dearborn Stove Co., Chicago, Ill. (Gas)
Dearborn Stove Co., Dallas, Texas (Gas)
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich. (Oil & gas)
Easyheet Inc., Seattle, Wash. (Oil)
Electromode Corp., Rochester, N. Y. (Electric)
Empire Stove Co., Belleville, Ill. (Gas)
Enterprise Foundry Co., Belleville, Ill. (Coal and Wood)
Evans Products Co., Plymouth, Mich. (Oil & gas)
Excelsior Stove & Mfg. Co., Quincy, Ill. (Coal)
Florence Stove Co., Gardner, Mass. (Oil & gas)
General Gas Light Co., Kalamazoo, Mich. (Gas)
Gray & Dudley Co., Nashville, Tenn. (Coal, gas, oil)
Harrison Sheet Steel Co., Chicago, Ill.
Heating Equipment Mfg. Co., San Francisco, Calif. (Oil & gas)
Hirsh Mfg. Co., Garland, Texas. (Natl., butane & mfg.)
Houston Blow Pipe & Sheet Metal Works, Houston, Texas. (Gas)
Independence Stove & Mfg. Co., Independence, Mo. (Gas)
Inland Steel Container Co., Chicago, Ill. (Gas)
International Oil Burner Co., St. Louis, Mo. (Oil)
Jackes-Evans Mfg. Co., St. Louis, Mo.
Kilbury Mfg. Co., Inc., Lawndale, Calif. (Gas)
Kresky Mfg. Co., Inc., Petaluma, Calif. (Oil)
Kresno-Stamm Mfg. Co., Palisades Park, N. J. (Oil)
Laco Oil Burner Co., Inc., Griswold, Iowa. (Oil)
Lasko Metal Products, Inc., West Chester, Pa. (Gas)
Leslie Mfg. Co., Dallas, Texas. (Gas)
Little Burner Co., Inc., H. C., San Rafael, Calif. (Oil)
Lonergan Mfg. Co., Albion, Mich. (Oil & gas)
Magic Chef, Inc., St. Louis, Mo. (Oil & gas)
Martin Stamping & Stove Co., Huntsville, Ala. (Gas)
Moore Div., Conlon-Moore Corp., Joliet, Ill. (Coal, Oil, Gas)
Mulkey Co., J. F., Detroit, Mich. (Trailer)
National Gas Equipment Co., Inc., Terrell, Texas. (Gas)
Northwest Heating, Inc., Portland, Ore. (Electric)
NuTone, Inc., Cincinnati, Ohio. (Electric)
Oakland Foundry Co., Belleville, Ill.
Ohio Foundry & Mfg. Co., Steubenville, Ohio. (Gas)
Ohio Stove Co., Portsmouth, Ohio. (Coal)
Perfection Stove Co., Cleveland, Ohio. (Oil & gas)
Pernot Corp., Norwalk, Calif. (Oil)
Phillips & Buttorff Mfg. Co., Nashville, Tenn. (Gas)
Pittston Stove Co., Pittston, Pa. (Coal or Wood)
Portland Stove Foundry Co., Portland, Maine.
Premier Stove Co., Belleville, Ill. (Gas)
Quad Stove Mfg. Co., Columbus, Ohio. (Gas)
Quincy Stove Mfg. Co., Quincy, Ill. (Oil & gas)
RCA-Estate Appliance Corp., Subsidiary of Radio Corp. of America, Hamilton, Ohio. (Gas & oil)
Reznor Mfg. Co., Mercer, Pa. (Gas)
Rheem Mfg. Co., New York, N. Y. (Gas)
Rhoades Industries, Inc., Fargo, N. Dak. (Coal)
Robinson Heaters, Inc., Columbus, Ohio. (Gas)
Samuel Stamping & Enameling Co., Chattanooga, Tenn. (Gas)
Schoedinger, F. O., Columbus, Ohio. (Gas & LP gas)
Silent Sioux Corp., Orange City, Iowa. (Oil & gas)
Southern Aircraft Co., Garland, Dallas Co., Texas. (Gas)
Spark Stove Co., Inc., Oakland, Calif. (Oil)
Sunshine Mantle Co., Chanute, Kans. (Gas)
Superior Mfg. Co., Pittsburgh, Pa. (Gas)
Surface Combustion Corp., Toledo, Ohio. (Gas)
Temco, Inc., Nashville, Tenn.
Tesco, Inc., Tulsa, Okla. (Gas)
Therm Oil Burner Co., Seattle, Wash. (Oil)
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif. (Electric)
United States Stove Co., South Pittsburg, Tenn. (Gas)
Viking Mfg. Corp., Cleveland, Ohio. (Oil)
Washington Stove Works, Everett, Wash. (Wood)
Williams Radiator Co., Glendale, Calif. (Gas)

HEATERS, DOMESTIC WATER, STORAGE TYPE

Electric

Airtemp Div., Chrysler Corp., Dayton, Ohio.
Ajax Thermostatic Controls Co., Gates Mills, Ohio.
Auburn Burner Co., Auburn, Ind.
Bard Mfg. Co., Bryan, Ohio.
Bastian-Morley Co., Inc., La Porte, Ind.
Bock Corp., Madison, Wis.
Cady Co., Sub. General Fittings Co., Providence, R. I.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Cleveland Heater Co., Cleveland, Ohio.
Combustion Engineering Co., Inc., Chattanooga, Tenn.
Crane Co., Chicago, Ill.
Cuprometal Mfg. Corp., Corona, N. Y.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
Gray & Dudley Co., Nashville, Tenn.
Hotstream Heater Co., Cleveland, Ohio.
Hynes & Cox Electric Corp., Watervliet, N. Y.
Kelvinator Div., Nash-Kelvinator Corp., Detroit, Mich.

Kilbury Mfg. Co., Inc., Lawndale, Calif.
Lawson Mfg. Co., Pittsburgh, Pa.
McGraw Electric Co., Clark Div., Chicago, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Pacific Coast Heater Corp., San Gabriel, Calif.
Pennsylvania Range Boiler Co., Philadelphia, Pa.
Perfection Stove Co., Cleveland, Ohio.
Piatt Products Corp., Lansing, Mich.
Red Spot Electric Co., Tacoma, Wash.
Rheem Mfg. Co., New York, N. Y.
Smith Corp., A. O., Milwaukee, Wis.
Sunbeau Heater Co., Los Angeles, Calif.
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.
Tru-Mac Mfg. Co., Reading, Mass.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Westinghouse Electric Corp., Pittsburgh, Pa.
Wood Co., John, Conshohocken, Pa.
York-Shipley, Inc., York, Pa.

Gas Fired

Airtemp Div., Chrysler Corp., Dayton, Ohio.
Ajax Thermostatic Controls Co., Gates Mills, Ohio.
Aldrich Co., Wyoming, Ill.
American Gas Machine Co., Albert Lea, Minn.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa
Aqua-Air Corp., Elmont, L. I., N. Y.
Auburn Burner Co., Auburn, Ind.
Autogas Co., Chicago, Ill.
Bard Mfg. Co., Bryan, Ohio.
Bastian Mfg. Co., W. B., Los Angeles, Calif.
Bastian-Morley Co., Inc., LaPorte, Ind.
Bock Corp., Madison, Wis.
Brown Steel Tank Co., Minneapolis, Minn.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Buckeye Water Heater Co., Cleveland, Ohio.
Cirklair Products Div. Folsom Co., Inc., Dallas, Texas. (Gas)
Clayton & Lambert Mfg. Co., Louisville, Ky.
Cleveland Heater Co., Cleveland, Ohio.
Coleman Co., Inc., Wichita, Kans. (and LP)
Combustion Engineering Co., Inc., Chattanooga, Tenn.
Continental Water Heater Co., Los Angeles, Calif.
Crane Co., Chicago, Ill.
Dary Co., W. M., Long Beach, Calif.
Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Dearborn Stove Co., Chicago, Ill.
Delco Appliance Div. General Motors Corp., Rochester, N. Y.
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
Evans Products Co., Plymouth, Mich.
EverHot Heater Co., Detroit, Mich.
Eveready Supply Co., Dallas, Texas.
General Water Heater Corp., Burbank, Calif.
Graham Hambly Co., Los Angeles, Calif.
Hamler Boiler & Tank Co., Chicago, Ill.
Handley-Brown Heater Co., Jackson, Mich.
Harrison Sheet Steel Co., Chicago, Ill.
Harrison Steel Cabinet Co., Chicago, Ill.
Hi-Qua Mfg. Co., Philadelphia, Pa.
Hotstream Heater Co., Cleveland, Ohio.
Hoyt Heater Co. of No. Calif., Oakland, Calif.
Hynes & Cox Electric Corp., Watervliet, N. Y.
Lawson Mfg. Co., Pittsburgh, Pa.
Los Angeles Gas Appliance Co., Inc., Los Angeles, Calif.
Lovekin Water Heater Co., Philadelphia, Pa.
McDaniel Mfg. Co., Inc., Dallas, Texas.
McGraw Electric Co., Clark Div., Chicago, Ill.
Mustee Heater Co., Cleveland, Ohio.
National Appliances, Inc., Pittsburgh, Pa. (Nat., Mfg., LP)
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Pacific Coast Heater Corp., San Gabriel, Calif.
Pennsylvania Range Boiler Co., Philadelphia, Pa.
Pioneer Water Heater Corp., Los Angeles, Calif.
Pittsburgh Water Heater Co., Pittsburgh, Pa.
Republic Heater Corp., Huntington Park, Calif.
Rheem Mfg. Co., New York, N. Y.
Ruud Mfg. Co., Pittsburgh, Pa.
Schoedinger, F. O., Columbus, Ohio.
Smith Corp., A. O., Milwaukee, Wis.
Southwestern Heater Corp., Dallas, Texas.
Star Heater Co., Dallas, Texas. (Nat., Mfg., LP)
Sunbeau Heater Co., Los Angeles, Calif. (LP, Nat. & Mfg.)
Sunshine Mantle Co., Chanute, Kans.
SuperbO Mfg. Co., Los Angeles, Calif.
Thompson Mfg. Co., A. F., Huntington, W. Va.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Wood Co., John, Conshohocken, Pa.
York-Shipley, Inc., York, Pa.

Oil Fired

Aldrich Co., Wyoming, Ill.
Allen Mfg. Co., Inc., Nashville, Tenn.
American Gas Machine Co., Albert Lea, Minn.
Aqua-Air Corp., Elmont, L. I., N. Y.
Auburn Burner Co., Auburn, Ind.
Bastian-Morley Co., Inc., LaPorte, Ind.
Bock Corp., Madison, Wis.
Breeze Corps., Inc., Newark, N. J.
Brown Products Co., Forest Hills, N. Y.
Century Engineering Corp., Cedar Rapids, Iowa.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Coleman Co., Inc., Wichita, Kans.
Crane Co., Chicago, Ill.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
DeSoto Oil Burner Corp., York, Pa.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Duo-Therm Div., Motor Wheel Corporation, Lansing, Mich.
Electrol Burner Mfg. Co., Rutherford, N. J.
Evans Products Co., Plymouth, Mich.
General Oil Heating Corp., West New York, N. J.
Gilcor Products Corp., Dowagiac, Mich.
Gillen Co., J. L., Dowagiac, Mich.
Gilmore & Co., Jackson G., Columbus, Ohio.
Hotstream Heater Co., Cleveland, Ohio.
Hynes & Cox Electric Corp., Watervliet, N. Y.
Johnson Co., S. T., Oakland, Calif. & Philadelphia, Pa.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Kresno-Stamm Co., New York, N. Y.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Nu-Way Corp., Rock Island, Ill.
Perfection Stove Co., Cleveland, Ohio.
Petroleum Heat & Power Co., Stamford, Conn.
Piatt Products Corp., Lansing, Mich.
Preferred Utilities Mfg. Corp., New York, N. Y.
Ray Oil Burner Co., San Francisco, Calif.
Republic Products Co., Philadelphia, Pa.
Rheem Mfg. Co., New York, N. Y.
Scott-Newcomb, Inc., St. Louis, Mo.
Sunbeau Heater Co., Los Angeles, Calif.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Toledo Heater Co., Toledo, Ohio.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
Viking Mfg. Corp., Cleveland, Ohio.

Stoker Fired

Aqua-Air Corp., Elmont, L. I., N. Y.
Catskill Metal Works, Inc., Catskill, N. Y.
Gehl Bros. Mfg. Co., West Bend, Wis.

HEATING COILS

See Coils, Heating

HOISTS, HAND AND POWER

American Engineering Co., Philadelphia, Pa. (Power)
American MonoRail Co., Cleveland, Ohio. (Electric)
Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
Chicago Pneumatic Tool Co., New York, N. Y. (Power)
Chisholm-Moore Hoist Corp., Columbus McKinnon Chain Corp., Tonawanda, N. Y.
Cleveland Crane & Engineering Co., Wickliffe, Ohio. (Hand & electric)
Detroit Hoist & Machine Co., Detroit, Mich.
Electro Lift, Inc., New York, N. Y. (Electric)
Euclid Crane & Hoist Co., Euclid, Ohio. (Electric)
Ford Chain Block Div., American Chain & Cable Co., Inc., York, Pa. (Hand & electric)
Harnischfeger Corp., Milwaukee, Wis. (Electric)
Harrington Co., Philadelphia, Pa. (Hand & electric)
Independent Pneumatic Tool Co., Aurora, Ill. (Power)
Industrial Brownhoist Corp., Bay City, Mich.
Lisbon Hoist & Crane Co., Lisbon, Ohio. (Electric)
Louden Machinery Co., Fairfield, Iowa.
Lug-All Co., The, Wynnewood, Pa.
McCollum Hoist & Mfg. Co., Downers Grove, Ill.
National Screw & Mfg. Co., Chester Hoist Div., Lisbon, Ohio. (Hand)
Philadelphia Chain Block & Mfg. Co., Inc., Philadelphia, Pa.
Reading Chain & Block Corp., Reading, Pa. (Hand & power)

Robbins & Myers, Inc., Springfield, Ohio. (Hand & power)
Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.
Stephens-Adamson Mfg. Co., Aurora, Ill.
Whiting Corp., Harvey, Ill. (Electric)
Wright Hoist Div. American Chain & Cable Co., York, Pa.
Yale & Towne Mfg. Co., Philadelphia, Pa.

HOODS, DRAFT, GAS

See Draft Diverters, Gas Heaters

HOSE AND FITTINGS, METAL FLEXIBLE

Aeroquip Corp., Jackson, Mich.
American Metal Hose Branch, American Brass Co., Waterbury, Conn.
American Ventilating Hose Co., New York, N. Y. (Non-metallic)
Everhot Products Co., Chicago, Ill.
Flexonics Corp., Maywood, Ill.
Hunt & Son, Inc., C. B., Salem, Ohio.
Packless Metal Hose, Inc., New Rochelle, N. Y.
Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa.
Seamless Co., Inc., Long Island City, N.Y.
Titeflex, Inc., Newark, N. J.
United Metal Hose Co., Inc., Long Island City, N. Y.
Uniflex Metal Hose Corp., Springfield, Mass.

HOUSINGS, BLOWER AND FAN

Air Controls, Inc., Cleveland, Ohio.
Chicago Blower Corp., Franklin Park, Ill. (Propeller)
Clarage Fan Co., Kalamazoo, Mich. (Blower)
Commercial Shearing & Stamping Co., Youngstown, Ohio (Blower & fan)
DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Detroit Stamping Co., Detroit, Mich. (Blower)
Hastings Air Conditioning Co., Inc., Hastings, Nebr. (Blower)
Jan-Air, Inc., Richmond, Ill. (Blower, cast iron)
Lau Blower Co., Dayton, Ohio. (Blower)
Martin Fan & Blower Co., Chicago, Ill.
Nelson Products, Herman, American Air Filter Co., Inc., Louisville, Ky.
Northern Blower Co., Cleveland, Ohio. (Blower)
Revcor, Chicago, Ill. (Blower)
Sandberg Mfg. Co., Portland, Ore. (Blower)
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Utica Products, Inc., Utica, N. Y.
Viking Air Conditioning Corp., Cleveland, Ohio.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass. (Blower & fan)

HUMIDIFIER FITTINGS

See Fittings, Humidifier, Water Line

HUMIDIFIER VALVES

See Valves, Humidifier, Water Level

HUMIDIFIERS, FURNACE, AUTOMATIC

Evaporative

Agricola Furnace Co., Inc., Gadsden, Ala.
Air Cooling Engineering Co., Evanston, Ill.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Auto-Flo Corp., Detroit, Mich.
Automatic Humidifier Co., Cedar Falls, Iowa.
Bahnson Co., Winston-Salem, N. C.
Bard Mfg. Co., Bryan, Ohio.
Bettinger Corp., Waltham, Mass.
Char-Gale Mfg. Co., Minneapolis, Minn.
Cleveland Humidifier Co., Cleveland, Ohio.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Green Colonial Furnace Co., Des Moines, Iowa.
Jet-Heet, Inc., Englewood, N. J.
Lennox Furnace Co., Marshalltown, Iowa.
Maid-O'-Mist, Inc., Chicago, Ill.
Meyer Furnace Co., Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Pfening Co., Fred D., Columbus, Ohio.
Premier Furnace Co., Dowagiac, Mich.
Scoville Mfg. Co., Waterville, Conn.
Skilbeck Mfg. Co., Kenosha, Wis.
Skuttle Mfg. Co., Detroit, Mich.
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Viking Air Conditioning Corp., Cleveland, Ohio.
Western Blower Co., Seattle, Wash.

Spray

Air Controls, Inc., Cleveland, Ohio.
Air Cooling Engineering Co., Evanston, Ill.
American Foundry & Furnace Co., Bloomington, Ill.
Century Engineering Corp., Cedar Rapids, Iowa.
Daffin Mfg. Co., Lancaster, Pa.
Handelan Washed Air Co., Minneapolis, Minn.
Little Giant Vaporizer Co., Oklahoma City, Okla.
Meyer Furnace Co., Peoria, Ill.
Pollenex, Chicago, Ill.
Somers, Inc., H. J., Detroit, Mich. (Humidifying system)
Spray Engineering Co., Somerville, Mass.
Spraying Systems Co., Chicago, Ill.
Walton Laboratories, Inc., Irvington, N. J.
Water Cooling Corp., New York, N. Y.

HUMIDISTATS

See Controls

HUMIDITY RECORDERS

See Recorders, Humidity

HYGROMETERS

American Instrument Co., Inc., Silver Spring, Md.
Bristol Co., Waterbury, Conn.
Fee and Stemwedel, Inc., Chicago, Ill.
Foxboro Co., Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
G. M. Mfg. Co., New York, N. Y.
General Scientific Equipment Co., Philadelphia, Pa.
H-B Instrument Co., Philadelphia, Pa.
Johnson Service Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Moeller Instrument Co., Richmond Hill, N. Y.
Palmer Thermometers, Inc., Cincinnati, Ohio.
Philadelphia Thermometer Co., Philadelphia, Pa.
Precision Thermometer & Instrument Co., Philadelphia, Pa.
Taylor Instrument Companies, Rochester, N. Y.
Weksler Thermometer Corp., New York, N. Y.
Weston Electrical Instrument Corp., Newark, N. J.

INCINERATORS

Autogas Co., Chicago, Ill.
Bowser, Inc., Cairo, Ill. (Gas fired)
Calcinator Div., Valley Welding & Boiler Co., Bay City, Mich.
General Engineering Co., Bay City, Mich.
Goder Incinerator Corp., Chicago, Ill.
Incinerator Products Co., Detroit, Mich.
Majestic Co., Inc., Huntington, Ind.
Schwab Furnace Co., Milwaukee, Wis.
Vacuum Gas Burner Corp., Olean, N. Y.

INDICATING THERMOMETERS

See Thermometers, Indicating

INSULATING CEMENT

See Cement, Insulating

INSULATION

Building

Acme Asbestos Covering & Flooring Co., Chicago, Ill. (Rockwool)
Alfol Div., Reflectal Corp., New York, N. Y. (Blanket)
Alton Mineral Wool Insulation Co., St. Louis, Mo. (Loose, granulated & batts)
American Flange & Mfg. Co., Inc., New York, N. Y. (Reflective)
American Hair & Felt Co., Chicago, Ill. (Hair)
Armstrong Cork Co., Lancaster, Pa.
Bache & Co., Semon, New York, N. Y. (Glass)
Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
Barnhardt Mfg. Co., Charlotte, N. C.
Barrett Div. Allied Chemical & Dye Corp., New York, N. Y. (Rockwool)
Berger Furnace Mfg. Co., Pittsburgh, Pa. (Rockwool)
Cabot, Inc., Samuel, Boston, Mass.
Carey Co., Philip, Cincinnati, Ohio. (Mineral wool)
Celotex Corp., Chicago, Ill.
Certain-teed Products Corp., Ardmore, Pa. (Glass fiber)
Chamberlin Co. of America, Detroit, Mich. (Rockwool)
Coast Insulating Products, Los Angeles, Calif. (Granulated and batts)
Cork Insulation Co., New York, N. Y. (Cork)
Eagle-Picher Co., Cincinnati, Ohio. (Mineral Wool)
Flintkote Co., New York, N. Y. (Fibre board & insulating wool)

Infra Insulation, Inc., New York, N. Y. (Accordion aluminum)
Insulite Div. Minnesota & Ontario Paper Co., Minneapolis, Minn. (Wood fibre)
Johns-Manville, New York, N. Y.
Johnston Foil Mfg. Co., St. Louis, Mo. (Paper backed foil)
Keasbey Co., Robert A., New York, N. Y. (Asbestos)
Kimberly-Clark Corp., Neenah, Wis.
Lehon Co., Chicago, Ill. (Paper)
Libbey-Owens-Ford Glass Co., Toledo, Ohio. (Fiber glass)
Masonite Corp., Chicago, Ill. (Blankets)
Meadows, Inc., W. R., Elgin, Ill. (Cork & Asphalt)
Mundet Cork Corp., North Bergen, N. J. (Cork)
National Cork Co., Englewood, N. J. (Cork)
National Gypsum Co., Buffalo, N. Y. (Fiber board)
Owens-Corning Fiberglas Corp., Toledo, Ohio. (Board & blanket)
Pacific Lumber Co., San Francisco, Calif. (Wood fiber)
Pittsburgh Corning Corp., Pittsburgh, Pa. (Cellular glass)
Pittsburgh Plate Glass Co., Pittsburgh, Pa. (Cellular glass)
Plastergon Wall Board Co., Buffalo, N. Y.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Riverton Lime & Stone Co., Inc., Riverton, Va. (Mineral wool)
Robinson Insulation Co., Great Falls, Mont. (Vermiculite)
Silvercote Products, Inc., Chicago, Ill. (Reflective type)
Sisalkraft Co., Chicago, Ill. (Reflective)
Sprayo-Flake Co., Chicago, Ill. (Mineral fiber & adhesive)
Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos)
Standard Rolling Mills, Inc., Brooklyn, N. Y. (Reflective)
Tennessee Products & Chemical corp., Nashville, Tenn. (Mineral wool)
United Cork Cos., Kearney, N. J.
United States Gypsum Co., Chicago, Ill. (Mineral wool)
United States Mineral Wool Co., So. Milwaukee, Wis. (Mineral wool)
U. S. Rock Wool Co., Salt Lake City, Utah. (Blowing wool, batt and blanket)
Western Mineral Products Co., Minneapolis, Minn. (Vermiculite)
Western Rock Wool Corp., Huntington, Ind. (Fill)
Wilson & Co., Inc., Chicago, Ill. (Hair, Felt)
Wilson, Inc., Grant, Chicago, Ill. (Rock Wool)
Wood Conversion Co., St. Paul, Minn.
Zonolite Co., Chicago, Ill.

Duct

Acme Asbestos Covering & Flooring Co., Chicago, Ill.
Alfol Div. Reflectal Corp., New York, N. Y. (Aluminum foil)
American Hair & Felt Co., Chicago, Ill. (Hair felt)
Armstrong Cork Co., Lancaster, Pa.
Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
Cabot, Inc., Samuel, Boston, Mass.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Celotex Corp., Chicago, Ill.
Coast Insulating Products, Los Angeles, Calif. (rolls)
Cork Insulation Co., Inc., New York, N. Y. (Cork)
Eagle-Picher Co., Cincinnati, Ohio.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Felters Co., Inc., Boston, Mass. (Felt)
Gustin-Bacon Mfg. Co., Kansas City, Mo. (Glass fiber)
Hinde & Dauch Paper Co., Sandusky, Ohio.
Insulite Div. Minnesota & Ontario Paper Co., Minneapolis, Minn. (Wood fiber)
Johns-Manville, New York, N. Y.
Keasbey & Mattison Co., Ambler, Pa. (Asbestos)
Keasby Co., Robert A., New York, N. Y. (Aircell cork & asbestos)
Keystone Asphalt Products Co., Chicago, Ill.
LaClede-Christy Clay Products Co., St. Louis, Mo.
Libbey-Owens-Ford Glass Co., Toledo, Ohio. (Fiber glass)
Masonite Corp., Chicago, Ill.
Minnesota Mining & Mfg. Co., St. Paul, Minn.
Mortell Co., J. W., Kankakee, Ill. (Cork coating)
Mundet Cork Corp., North Bergen, N. J. (Cork)
Munn and Steele, Inc., Newark, N. J. (Plastic)
National Cork Co., Englewood, N. J. (Cork)
National Gypsum Co., Buffalo, N. Y. (Rock Wool)
Norristown Magnesia & Asbestos Co., Norristown, Pa.
Owens-Corning Fiberglas Corp., Toledo, Ohio. (Rigid & flexible with facings)
Pabco Products Inc., San Francisco, Calif. (Magnesia)
Pittsburgh Corning Corp., Pittsburgh, Pa. (Cellular glass)
Pittsburgh Plate Glass Co., Pittsburgh, Pa. (Cellular Glass)
Quigley Co., Inc., New York, N. Y.
Reflectal Corp., New York, N. Y. (Aluminum)
Refractory & Insulation Corp., New York, N. Y. (Inside duct lining)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Robinson Insulation Co., Great Falls, Mont.
Ruberoid Co., New York, N. Y. (Asbestos)
Sall Mountain Co., Hamilton, Ohio.
Sprayo-Flake Co., Chicago, Ill. (Mineral fiber & adhesive)
Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos)
United Cork Cos., Kearney, N. J.
United States Mineral Wool Co., So. Milwaukee, Wis. (Mineral Wool)
United States Rubber Co., New York, N. Y. (Sound deadening)
Western Felt Works, Chicago, Ill. (Felt)
Wilson & Co., Inc., Chicago, Ill. (Hair & felt)
Wilson, Inc., Grant, Chicago, Ill.
Wood Conversion Co., St. Paul, Minn.

Furnace

Acme Asbestos Covering & Flooring Co., Chicago, Ill. (Asbestos, rockwool)
Akeley-Steele Co., Aurora, Ill.
Alfol Div. Reflectal Corp., New York, N. Y. (Aluminum foil & asbestos combination)
Babcock & Wilcox Co., Refractories Div., New York, N. Y. (Firebrick, cement mixes)
Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Asbestos & magnesia)
Chicago Fire Brick Co., Chicago, Ill. (Mineral wool & plastic cement)
Coast Insulating Products, Los Angeles, Calif. (Plastic cement)
Eagle-Picher Co., Cincinnati, Ohio.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Green Fire Brick Co., A. P., Mexico, Mo. (Mineral wool)
Gustin-Bacon Mfg. Co., Kansas City, Mo. (Glass fiber)
International Vermiculite Co., Girard, Ill.
Johns-Manville, New York, N. Y.
Keasbey & Mattison Co., Ambler, Pa. (Asbestos)
Keasby Co., Robert A., New York, N. Y. (Asbestos cement, magnesium blocks)
LaClede-Christy Clay Products Co., St. Louis, Mo. (Cement & blocks)
Norristown, Magnesia & Asbestos Co., Norristown, Pa.
Owens-Corning Fiberglas Corp., Toledo, Ohio. (Foil faced)
Pabco Products Inc., San Francisco, Calif.
Plibrico Jointless Firebrick Co., Chicago, Ill. (Mineral Wool)
Quigley Co., Inc., New York, N. Y.
Refractory & Insulation Corp., New York, N. Y. (Block, blanket)
Robinson Insulation Co., Great Falls, Mont. (High temperature cement)
Ruberoid Co., New York, N. Y. (Asbestos)
Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos)
United States Mineral Wool Co., So. Milwaukee, Wis. (Mineral wool)
U. S. Rock Wool Co., Salt Lake City, Utah. (Rock wool cement)
Western Mineral Products Co., Minneapolis, Minn. (Vermiculite)
Wilson, Inc., Grant, Chicago, Ill. (Asbestos)

KITCHEN FANS

See Fans, Kitchen

LAMPS, GERMICIDAL

Domestic Devices, Cleveland, Ohio.
General Electric Co., Cleveland, Ohio.
Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
Sperti, Inc., Norwood, Ohio.
Westinghouse Electric Corp., Bloomfield, N. J.

LEAD SHEETS

See Sheets, Metal, Lead

LIFTS, SKYLIGHT

Biersach & Niedermeyer Co., Milwaukee, Wis.
Danzer Metal Works Co., Hagerstown, Md.
Levow, David, New York, N. Y. (Gearing)
Park City Cornice Works, Inc., Bridgeport, Conn.
Perkinson, William J., Chicago, Ill.
Van Noorden Co., E., Boston, Mass.
Weiss & Co., H., New York, N. Y.

LIMIT CONTROLS

See Controls

LININGS, CHIMNEY

Condensation Engineering Corp., Chicago, Ill. (Vitreous enamel)
Wallace Co., William, Metalbestos Div., Belmont, Calif.

LINKS, FUSIBLE

Richards-Wilcox Mfg. Co., Aurora, Ill.
Steffens-Amberg Co., Newark, N. J.
Westinghouse Electric Corp., Pittsburgh, Pa.

LOCK FORMING

See Machines, Lock Forming

LOUVERS AND SHUTTERS, AUTOMATICALLY OR MANUALLY CONTROLLED

Air Controls, Inc., Cleveland, Ohio.
Air Conditioning Products Co., Detroit, Mich.
Airmaster Corp., Chicago, Ill.
Air & Refrigeration Corp., New York, N. Y.
Allen Ventilator Div. Production Planning Co., Rochester, Mich.
American Coolair Corp., Jacksonville, Fla.
American Foundry & Furnace Co., Bloomington, Ill.
American Steel Band Co., Pittsburgh, Pa.
American Warming & Ventilating Co., Toledo, Ohio.
Arex Co., Chicago, Ill.
Arlington Electric Co., St. Louis, Mo.
Babbin, Inc., New York, N. Y.
Barber-Colman Co., Rockford, Ill.
Belter Electric Mfg. Co., G. J., St. Louis, Mo.
Berns Mfg. Co., Chicago, Ill.
Bertram Co., Harvey P., Cincinnati, Ohio.
Biersach & Niedermeyer Co., Milwaukee, Wis.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Buffalo Forge Co., Buffalo, N. Y.
Burt Mfg. Co., Akron, Ohio.
Campbell Co., E. K., Kansas City, Mo.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Clay Equipment Corp., Cedar Falls, Iowa.
Commercialaire, Inc., Brooklyn, N. Y.
Controlair Mfg. Co., Los Angeles, Calif.
DeBothezat Fans Div. American Machine & Metals, Inc., East Moline, Ill.
Dual-Air Fan Corp., South Elgin, Ill.
Eagle-Picher Co., Cincinnati, Ohio.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Elgo Shutter & Mfg. Co., Detroit, Mich.
Hunter Fan & Ventilating Co., Memphis, Tenn.
International Engineering, Inc., Dayton, Ohio.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Krauser-Boyd, Inc., North Tonawanda, N. Y.
Lakewood Engineering & Mfg. Co., Chicago, Ill.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Martin Fan & Blower Co., Chicago, Ill.
Maysteel Products, Inc., Milwaukee, Wis.
Meier Electric & Machine Co., Inc., Indianapolis, Ind.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Myers Electric Co., Inc., Pittsburgh, Pa.
Nelson Products, Herman, American Air Filter Co., Louisville, Ky.
Overly Mfg. Co., Greensburg, Pa.
Peerless Electric Co., Warren, Ohio.
Perkinson, William J., Chicago, Ill.
Reed Unit-Fans, Inc., New Orleans, La.
Riggin Metal Products, Kankakee, Ill.
Robertson Co., H. H., Pittsburgh, Pa.
Schwitzer-Cummins Co., Indianapolis, Ind.
Signal Electric Mfg. Co., Menominee, Mich.
Simpson Screen Co., Oakland, Calif.
Standard Stamping & Perforating Co., Chicago, Ill.
Swartwout Co., Cleveland, Ohio.
Titus Mfg. Corp., Waterloo, Iowa.
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Tuttle & Bailey, Inc., New Britain, Conn.
United States Register Co., Battle Creek, Mich.
Uno Ventilator Co., Malden, Mass.
Van Noorden Co., E., Boston, Mass.
White & Sons, Inc., Wilfrid O., Boston, Mass.
Wing Mfg. Co., L. J., Linden, N.J.
Young Regulator Co., Cleveland, Ohio.

LOUVERS, STATIONARY

Air Control Products, Inc., Coopersville, Mich.
American Steel Band Co., Pittsburgh, Pa.
American Warming & Ventilating Co., Toledo, Ohio.
Appleton Supply Co., Inc., Appleton, Wis. (End Wall)
Arex Co., Chicago, Ill.
Barber-Colman Co., Rockford, Ill.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Burt Mfg. Co., Akron, Ohio.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Commercialaire, Inc., Brooklyn, N. Y.
Elgo Shutter & Mfg. Co., Detroit, Mich.
Firecraft Corp., Chicago, Ill.
Hemphill Co., A. D., Lake City, Minn.
Inland Steel Products Co., Milwaukee, Wis.
Krauser-Boyd, Inc., North Tonawanda, N. Y.
Leslie Welding Co., Chicago, Ill.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Molloy Machine Corp., Chicago, Ill.
Muckle Mfg. Co., Owatonna, Minn.
Perkinson, William J., Chicago, Ill.
Simpson Screen Co., Oakland, Calif.
Swartwout Co., Cleveland, Ohio.
Titus Mfg. Corp., Waterloo, Iowa.
United States Register Co., Battle Creek, Mich.
Uno Ventilator Co., Malden, Mass.

MACHINERY, SHEET METAL, REBUILT AND USED

(Capacity 10 ga or lighter)

Acme Equipment Co., Inc., Chicago, Ill.
Brooks Co., Inc., B. D., Boston, Mass.
Burns Machinery Co., F. W., Milwaukee, Wis.
Federal Machinery Co., New York, N. Y. (Sheet Metal)
Harris Machinery Co., Minneapolis, Minn.
Hyman & Sons, Joseph, Philadelphia, Pa.
Interstate Machinery Co., Inc., Chicago, Ill.
Machine Rebuilding Co., Detroit, Mich.
Machinery Liquidating Co., Detroit, Mich.
Milton Equipment Co., Philadelphia, Pa.
Potts-Farrington Co., Philadelphia, Pa.
Reiner & Campbell Co., Inc., Newark, N. J.
St. Louis Tool Co., St. Louis, Mo.

MACHINES, SHEET METAL WORKING

(Capacity 10 ga or lighter)

Bar Folding, Hand

Barth Mfg. Co., Milldale, Conn.
Fallsington Mfg. Co., Fallsington, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
St. Louis Tool Co., St. Louis, Mo.
Smith, R. E., Waukegan, Ill.

Beading, Hand

Barth Mfg. Co., Milldale, Conn.
Kraus Mfg. Co., Chas. E., Louisville, Ky.
Niagara Machine & Tool Works, Buffalo, N. Y.
Packham Crimper Co., Mechanicsburg, Ohio.
Peck, Stow & Wilcox Co., Southington, Conn.
Robertson, F. L., Buffalo, N. Y.

Beading, Power

Baker Bros., Inc., Toledo ,Ohio.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Fallsington Mfg. Co., Fallsington, Pa.
Kling Bros. Engineering Works, Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Swain Mfg. Co., Fred J., St. Louis, Mo.
Wales-Strippit Corp., North Tonawanda, N. Y.

Benders (Angle, Etc.)

Bath Company, Cyril, Cleveland, Ohio. (Contour formers)
Champion Blower & Forge Co., Lancaster, Pa.
Connors & Davis Sales Corp., West Springfield, Mass.
Excelsior Tool & Machine Co., East St. Louis, Ill. (Circular bending)
Hendley & Whittemore Co., Beloit, Wis.
Hossfeld Mfg. Co., Winona, Minn.
Kane & Roach, Inc., Syracuse, N. Y.
Kling Bros. Engineering Works, Chicago, Ill.
Knights Co., James, Sandwich, Ill.
Martens & Stormoen, Boston, Mass.
Merchandising & Manufacturing Associates, Inc., Lancaster, Pa. (Shrinkers & stretchers)
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Pedrick Tool & Machine Co., Philadelphia, Pa.
Smith, R. E., Waukegan, Ill.
Thomas Machine Mfg. Co., Pittsburgh, Pa.
Whitney Metal Tool Co., Rockford, Ill.

Brakes, Hand

Acme Equipment Co., Inc., Chicago, Ill.

Barth Mfg. Co., Milldale, Conn.
Berkroy Products, Inc., Burbank, Calif.
Dreis & Krump Mfg. Co., Chicago, Ill.
Excelsior Tool & Machine Co., East St. Louis, Ill.
G. & S. Machine Shop, Detroit, Mich.
Hallmor, Inc., Bridgeville, Pa.
Harris, A. R., Hammond, Ind.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Ward Machinery Co., Chicago, Ill.
Webb Machine & Tool Co., Imperial, Pa.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

Brakes, Portable

Berkroy Products, Inc., Burbank, Calif.
Dreis & Krump Mfg. Co., Chicago, Ill.
G. & S. Machine Shop, Detroit, Mich.
Hallmor, Inc., Bridgeville, Pa.
Harris, A. R., Hammond, Ind.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Vyke Brake Co., Omaha, Nebr.
Webb Machine & Tool Co., Imperial, Pa.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

Brakes, Power

Bath Co., Cyril, Cleveland, Ohio.
Cincinnati Shaper Co., Cincinnati, Ohio.
Cleveland Crane & Engineering Co., Wickliffe, Ohio.
Dreis Co., Ltd., Edward J., San Carlos, Calif. (Air)
Dreis & Krump Mfg. Co., Chicago, Ill.
Heartley Machine & Tool Co., Toledo, Ohio.
Munton Mfg. Co., Franklin Park, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Verson Allsteel Press Co., Chicago, Ill.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

Brakes, Press (and Dies)

Bath Co., Cyril, Cleveland, Ohio.
Connors & Davis Sales Corp., West Springfield, Mass.
Dreis & Krump Mfg. Co., Chicago, Ill.
Doelger & Kirsten, Inc., Milwaukee, Wis.
Niagara Machine & Tool Works, Buffalo, N. Y.
Pacific Industrial Mfg. Co., Oakland, Calif.

Burring, Hand

Barth Mfg. Co., Milldale, Conn.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Burring, Power

Independent Pneumatic Tool Co., Aurora, Ill.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Rotor Tool Co., Cleveland, Ohio.

Cleat Bending, Hand

Niagara Machine & Tool Works, Buffalo, N. Y.
Riverside Machinery Co., Minneapolis, Minn.
Smith, R. E., Waukegan, Ill.

Combination, Hand
(Beading, Burring, Turning, Wiring, etc.)

Barth Mfg. Co., Milldale, Conn.
Ingram Machinery Co., Picher, Okla.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Packham Crimper Co., Mechanicsburg, Ohio.
Peck, Stow & Wilcox Co., Southington, Conn.

Combination, Power
(Beading, Burring, Turning, Wiring, etc.)

Maplewood Machinery Co., Chicago, Iil
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Wysong & Miles Co., Greensboro, N. C.

Crimping, Hand

Barth Mfg. Co., Milldale, Conn.
Fallsington Mfg. Co., Fallsington, Pa.
Ingram Machinery Co., Picher, Okla.
Kraus Mfg. Co., Chas. E., Louisville, Ky.
Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Packham Crimper Co., Mechanicsburg, Ohio.
Peck, Stow & Wilcox Co., Southington, Conn.

Crimping, Power

Fallsington Mfg. Co., Fallsington, Pa.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Double Seaming, Roof, Power

Flagler Corp., The, Detroit, Mich.
Lockformer Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.

Elbow, Hand

Barth Mfg. Co., Milldale, Conn.
Kane & Roach, Inc., Syracuse, N. Y. (Downspout elbows)
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Elbow, Power

Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Filing

DoALL Co., Des Plaines, Ill.
Grob Bros., Grafton, Wis.

Flanging, Hand

Barth Mfg. Co., Milldale, Conn.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
"Original" Metal Flanging Machine Works, Seattle, Wash.
Peck, Stow & Wilcox Co., Southington, Conn.
Smith, R. E., Waukegan, Ill.
Ward Machinery Co., Chicago, Ill.
Weiss & Co., H., New York, N. Y.

Flanging, Power

Baker Bros., Inc., Toledo, Ohio.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Flagler Corp., The, Detroit, Mich.
Kling Bros. Engineering Works, Chicago, Ill.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Pacific Industrial Mfg. Co., Oakland, Calif.
Peck, Stow & Wilcox Co., Southington, Conn.
Swain Mfg. Co., Fred J., St. Louis, Mo.
Ward Machinery Co., Chicago, Ill.
Whiting Corp., Harvey, Ill.

Grooving, Hand

Barth Mfg. Co., Milldale, Conn.
Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Whitney Metal Tool Co., Rockford, Ill.

Grooving, Power

Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Standard Power Groove Machine Corp., New York, N. Y.

Gutter Forming, Hand

Kane & Roach, Inc., Syracuse, N. Y. (Power)
Robertson, F. L., Buffalo, N. Y.
Stamco, Inc., New Bremen, Ohio.

Lock Forming, Power

Connors & Davis Sales Corp., West Springfield, Mass.
Flagler Corp., The, Detroit, Mich.
Kane & Roach, Inc., Syracuse, N. Y.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.

Nibbling, Hand

Beverly Shear Mfg. Co., Chicago, Ill.
Fenway Machine Sales Co., Inc., Philadelphia, Pa.
National Machine Tool Co., Racine, Wis.

Nibbling, Power

Baker Bros., Inc., Toledo, Ohio.
Berkroy Products, Inc., Burbank, Calif.

Campbell Machine Div. American Chain & Cable Co., Inc., Bridgeport, Conn.
H. A. Mfg. Co., York, Pa.
Independent Pneumatic Tool Co., Aurora, Ill. (Portable)
Libert Machine Co., Green Bay, Wis.
St. Louis Tool Co., St. Louis, Mo.
Savage Co., W. J., Knoxville, Tenn.
Wales-Strippit Corp., North Tonawanda, N. Y.

Notching, Hand

Fallsington Mfg. Co., Fallsington, Pa. (Also power)
Merchandising and Mfg. Associates, Inc., Lancaster, Pa.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Whitney Metal Tool Co., Rockford, Ill.

Pittsburgh Lock Forming

Flagler Corp., The, Detroit, Mich.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Riverside Machinery Co., Minneapolis, Minn.

Pittsburgh Lock Opening

Birks Mfg. Co., Meriden, Conn.
Bristol Metal Working Equipment, Hartford, Conn.
Maplewood Machinery Co., Chicago, Ill.

Presses (and Dies)

Baker Bros., Inc., Toledo, Ohio. (Die cushions)
Bath Co., Cyril, Cleveland, Ohio.
Bertsch & Co., Cambridge City, Ind.
Benchmaster Mfg. Co., Gardena, Calif.
Bliss Co., E. W., Canton, Ohio.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Cincinnati Shaper Co., Cincinnati, Ohio.
Clearing Machine Corp., Chicago, Ill. (Presses)
Cleveland Crane & Engineering Co., Wickliffe, Ohio.
Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Davis & Son Machine Works, Los Angeles, Calif.
Diamond Machine Tool Co., Los Angeles, Calif.
Doelger & Kirsten, Inc., Milwaukee, Wis.
Dreis & Krump Mfg. Co., Chicago, Ill.
Fallsington Mfg. Co., Fallsington, Pa.
Famco Machine Co., Kenosha, Wis.
Federal Machine & Welder Co., Warren, Ohio.
Henry & Wright Div. Emhart Mfg. Co., Hartford, Conn.
Highland Engineering Co., Santa Monica, Calif.
Johnson Machine & Press Corp., Elkhart, Ind.
Leslie Welding Co., Chicago, Ill.
Marshalltown Mfg. Co., Marshalltown, Iowa.
Munton Mfg. Co., Franklin Park, Ill.
New Albany Machine Mfg. Co., New Albany, Ind.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Pacific Industrial Mfg. Co., Oakland, Calif.
Swain Mfg. Co., Fred J., St. Louis, Mo.
Thomas Machine Mfg. Co., Pittsburgh, Pa.
Verson Allsteel Press Co., Chicago, Ill.
Wales-Strippit Corp., North Tonawanda, N. Y.
Ward Machinery Co., Chicago, Ill.
Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia, Pa.
Wilson, K. R., Buffalo, N. Y. (Presses)
Wysong & Miles Co., Greensboro, N.C.
Zeh & Hahnemann Co., Newark, N. J.

Punches, Power

Beatty Machine & Mfg. Co., Hammond, Ind.
Bliss Co., E. W., Canton, Ohio.
Buffalo Forge Co., Buffalo, N. Y.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Diamond Machine Tool Co., Los Angeles, Calif.
Doelger & Kirsten, Inc., Milwaukee, Wis.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Fallsington Mfg. Co., Fallsington, Pa.
Famco Machine Co., Kenosha, Wis.
Hendley & Whittemore Co., Beloit, Wis.
Henry & Wright Div. Emhart Mfg. Co., Hartford, Conn.
Highland Engineering Co., Santa Monica, Calif.
Kling Bros. Engineering Works, Chicago, Ill.
Maxant Button & Supply Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Progressive Welder Sales Co., Detroit, Mich.
Rotex Punch Co., Oakland, Calif.
Royersford Foundry & Machine Co., Royersford, Pa.
Swaine Mfg. Co., Fred J., St. Louis, Mo.
Thomas Machine Mfg. Co., Pittsburgh, Pa.
Verson Allsteel Press Co., Chicago, Ill.
Wales-Strippit Corp., North Tonawanda, N. Y.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia, Pa.

Roll Forming, Power
(For Mouldings and Shapes)

Dahlstrom Machine Works, Chicago, Ill.
Flagler Corp., The, Detroit, Mich.
Kane & Roach, Inc., Syracuse, N. Y.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Yoder Co., Cleveland, Ohio.

Saws, Band, Sheet Metal Cutting

Barnes Co., Inc., W. O., Detroit, Mich.
Bett-Marr Mfg. Co., Hopkins, Minn.
Disston & Sons, Inc., Henry, Philadelphia, Pa.
DoAll Co., Des Plaines, Ill.
Famco Machine Co., Kenosha, Wis.
Grob Bros., Grafton, Wis.
Millers Falls Co., Greenfield, Mass.
Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)
Tannewitz Works, Grand Rapids, Mich.
Wells Mfg. Corp., Three Rivers, Mich.

Saws, Hack, Power

Alpha Tool & Supply Co., Westwood, N. J.
Barnes Co., Inc., W. O., Detroit, Mich.
Champion Blower & Forge Co., Lancaster, Pa.
Disston & Sons, Inc., Henry, Philadelphia, Pa.
DoAll Co., Des Plaines, Ill.
Independent Pneumatic Tool Co., Aurora, Ill. (Portable)
Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
Mid-States Welder Mfg. Co., Chicago, Ill. (Portable)
Milwaukee Electric Tool Corp., Milwaukee, Wis.
Racine Hydraulics & Machinery, Inc., Racine, Wis.
Robertson, F. L., Buffalo, N. Y.
Royersford Foundry & Machine Co., Royersford, Pa.
Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)
Skil Corporation, Chicago, Ill.

Seaming, Hand

Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

Seaming, Power

Bliss Co., E. W., Detroit, Mich.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Progressive Welder Sales Co., Detroit, Mich.
Stamco, Inc., New Bremen, Ohio.
Swain Mfg. Co., Fred J., St. Louis, Mo.

Setting Down, Hand

Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Setting Down, Power

Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Shears, Circle, Hand

Barth Mfg. Co., Milldale, Conn.
Berkroy Products, Inc., Burbank, Calif.
Beverly Shear Mfg. Co., Chicago, Ill.
Klenk's Aviation Snips, Wilmington, Del.
McCoy Products Co., Salt Lake City, Utah.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Shears, Circle, Power

Baker Bros., Inc., Toledo, Ohio.
H. A. Mfg. Co., York, Pa.
Kling Bros. Engineering Works, Chicago, Ill.
Libert Machine Co., Green Bay, Wis.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Wales-Strippit Corp., North Tonawanda, N. Y.
Whiting Corp., Harvey, Ill.

Shears, Electric, Portable

Black & Decker Mfg. Co., Towson, Md.
Merchandising & Manufacturing Associates, Inc., Lancaster, Pa. (Electric or pneumatic drill attachment)
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Skil Corporation, Chicago, Ill.
Stanley Electric Tool Div., Stanley Works, New Britain, Conn.
York Electric & Machine Co., York, Pa.

Shears, Rotary, Slitting, Hand

Barth Mfg. Co., Milldale, Conn.
Berkroy Products, Inc., Burbank, Calif.
Champion Blower & Forge Co., Lancaster, Pa.
Marshalltown Mfg. Co., Marshalltown, Iowa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Ward Machinery Co., Chicago, Ill.

Shears, Rotary, Slitting, Power

Baker Bros., Inc., Toledo, Ohio.
Bliss Co., E. W., Canton, Ohio.
Kling Bros. Engineering Works, Chicago, Ill.
Marshalltown Mfg. Co., Marshalltown, Iowa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Simonds Saw & Steel Co., Fitchburg, Mass. (Knives)
Stanley Electric Tool Div., Stanley Works, New Britain, Conn.
Wheelock Co., Geo. F., Birmingham, Ala.
Whiting Corp., Harvey, Ill.
Wilder Mfg. Co., Inc., Carmel, Calif.

Shears, Squaring, Foot

Acme Equipment Co., Inc., Chicago, Ill.
Barth Mfg. Co., Milldale, Conn.
Bertsch & Co., Cambridge City, Ind.
Diamond Machine Tool Co., Los Angeles, Calif.
Dreis Co., Ltd., Edward J., San Carlos, Calif.
Famco Machine Co., Kenosha, Wis.
Highland Engineering Co., Santa Monica, Calif.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Whitney Metal Tool Co., Rockford, Ill.
Wysong & Miles Co., Greensboro, N. C.

Shears, Squaring, Power

Acme Equipment Co., Inc., Chicago, Ill.
Barth Mfg. Co., Milldale, Conn.
Bertsch & Co., Cambridge City, Ind.
Bliss & Co., E. W., Canton, Ohio.
Cincinnati Shaper Co., Cincinnati, Ohio.
Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Cleveland Crane & Engineering Co., Wickliffe, Ohio.
Diamond Machine Tool Co., Los Angeles, Calif.
Dreis Co., Ltd., Edward J., San Carlos, Calif.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Famco Machine Co., Kenosha, Wis.
Frederick Iron & Steel, Inc., Frederick, Md.
Johnson Machine & Press Corp., Elkhart, Ind.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)
Stamco, Inc., New Bremen, Ohio.
Thomas Machine Mfg. Co., Pittsburgh, Pa. (¼ in. and heavier)
Whitney Metal Tool Co., Rockford, Ill.
Wysong & Miles Co., Greensboro, N. C.

Slip Roll Forming, Hand

Barth Mfg. Co., Milldale, Conn.
Berkroy Products, Inc., Burbank, Calif.
Bertsch & Co., Cambridge City, Ind.
Frederick Iron & Steel, Inc., Frederick, Md.
Hendley & Whittemore Co., Beloit, Wis.
Milton Equipment Co., Philadelphia, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Riverside Machinery Co., Minneapolis, Minn.
San Angelo Foundry & Machine Co., San Angelo, Texas.
Wysong & Miles Co., Greensboro, N. C.

Slip Roll Forming, Power

Bertsch & Co., Cambridge City, Ind.
Hendley & Whittemore Co., Beloit, Wis.
Kling Bros. Engineering Works, Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Milton Equipment Co., Philadelphia, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Reed Engineering Co., Carthage, Mo.
San Angelo Foundry & Machine Co., San Angelo, Texas.
Wysong & Miles Co., Greensboro, N. C.

Slitting, Hand

Barth Mfg. Co., Milldale, Conn.
Berkroy Products, Inc., Burbank, Calif.
Bertsch & Co., Cambridge City, Ind.
Beverly Shear Mfg. Co., Chicago, Ill.
Buffalo Forge Co., Buffalo, N. Y.
Hendley & Whittemore Co., Beloit, Wis.
Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Ward Machinery Co., Chicago, Ill.
Whitney Metal Tool Co., Rockford, Ill.

Slitting, Power

Bertsch & Co., Cambridge City, Ind.
Besco Mfg. Co., Cincinnati, Ohio.
Bliss Co., E. W., Canton, Ohio.
Buffalo Forge Co., Buffalo, N. Y
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Dahlstrom Machine Works, Chicago, Ill.
Hendley & Whittemore Co., Beloit, Wis.
Kane & Roach, Inc., Syracuse, N. Y.
Libert Machine Co., Green Bay, Wis.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
St. Louis Tool Co., St. Louis, Mo.
Stamco, Inc., New Bremen, Ohio.
Whiting Corp., Harvey, Ill.
Wilder Mfg. Co., Inc., Carmel, Calif.
Yoder Co., Cleveland, Ohio.

Wiring, Hand

Barth Mfg. Co., Milldale, Conn.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Wiring, Power

Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

MALLETS, METAL WORKING

Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y. (Lead)
Chicago Rawhide Mfg. Co., Chicago, Ill. (Rawhide)
Densewood Co., Elkhorn, Wis. (Wood)
Division Lead Co., Chicago, Ill. (Lead)
Goodrich Co., B. F., Akron, Ohio. (Rubber)
Greene, Tweed & Co., New York, N. Y. (Plastic, rawhide, composition, copper & babbitt)
Lignum-Vitae Products Corp., Jersey City, N. J.
Maplewood Machinery Co., Chicago, Ill.
New Plastic Corp., Hollywood, Calif. (Plastic)
Niagara Machine & Tool Works, Buffalo, N. Y. (Hickory)
Republic Rubber Div. Lee Rubber & Tire Corp., Youngstown, Ohio. (Rubber)
Southwest Mfg. Co., Santa Ana, Calif. (Plastic tipped)
Stanley Tools, New Britain, Conn. (Soft face hammers)
Stossel & Sons Co., Carl, Front Royal, Va. (Hickory & dogwood)

MATS, EVAPORATIVE COOLER

Morey, Dan, Los Angeles, Calif. (Aspen)
Palmer Mfg. Corp., Phoenix, Ariz. (Shredded Aspen Wood)

METAL CEILINGS

See Ceilings, Metal

METAL HOSE

See Hose

METAL SPRAY GUNS

See Guns, Spray, Metals

METAL STAMPINGS

See Stampings, Metal

METALS, PERFORATED, SHEET AND PLATE

Beckley Perforating Co., Garwood, N. J.

Belmont Smelting & Refining Wks,. Inc., Brooklyn, N. Y.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago Perforating Co., Chicago, Ill.
Cross Engineering Co., Carbondale, Pa.
Diamond Mfg. Co., Wyoming, Pa.
Erdle Perforating Co., Rochester, N. Y.
Harrington & King Perforating Co., Chicago, Ill.
Harrison Sheet Steel Co., Chicago, Ill.
Hendrick Mfg. Co., Carbondale, Pa.
Johnston & Chapman Co., Chicago, Ill.
Littleford Bros., Inc., Cincinnati, Ohio.
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
Mundt & Sons, Charles, Jersey City, N. J.
Nortmann-Duffke Co., Milwaukee, Wis.
Penn Metal Co., Inc., New York, N. Y.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Rigidized Metals Corp., Buffalo, N. Y.
Standard Stamping & Perforating Co., Chicago, Ill.
Superior Metal Fabricating Co., Niles, Ohio.
Wheeling Corrugating Co., Wheeling, W. Va. (Expanded)

METERS, AIR VELOCITY, DIRECT READING

Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Detroit Air Conditioning Service Co., Nashville, Mich.
Illinois Testing Laboratories, Inc., Chicago, Ill.
Taylor Instrument Companies, Rochester, N. Y.

MONORAIL SYSTEMS

(Track, Trolley, Hoist, Accessories)

American MonoRail Co., Cleveland, Ohio.
Chicago Tramrail Co., Chicago, Ill.
Cleveland Crane & Engineering Co., Wickliffe, Ohio.
Ferdon Equipment Engineering Co., Hillside, N. J.
Louden Machinery Co., Fairfield, Iowa.
Philadelphia Tramrail Co., Philadelphia, Pa.
Reading Chain & Block Corp., Reading, Pa.
Richards-Wilcox Mfg. Co., Aurora, Ill.
Shepard Niles Crane & Hoist Corp., Montour Falls, N.Y.
Webb Co., Jervis B., Detroit, Mich.
Wright Hoist Div., American Chain & Cable Co., Inc., York, Pa.

MOTOR TRUCKS

See Trucks, Motor

MOTORS, DUCT, DAMPER, MODULATING OR PROPORTIONING

See Controls

MOTORS, DUCT, DAMPER, TWO POSITION

See Controls

MOTORS, DRAFT, DAMPER, ELECTRICAL

See Controls

MOTORS, ELECTRIC

Fractional H.P.

Baldor Electric Co., St. Louis, Mo.
Barber-Colman Co., Rockford, Ill.
Bodine Electric Co., Chicago, Ill.
Brown-Brockmeyer Co., Inc., Dayton, Ohio.
Century Electric Co., St. Louis, Mo
Crise Controls Div., Acro Mfg. Co., Columbus, Ohio.
Delco Appliance Div. General Motors Corp., Rochester, N. Y.
Delco Products Div. General Motors Corp., Dayton, Ohio.
Diehl Mfg. Co., Somerville, N. J.
Eastern Air Devices, Inc., Brooklyn, N. Y.
Electric Motor Corp., Div., Howard Industries, Inc., Racine, Wis.
Emerson Electric Mfg. Co., St. Louis, Mo.
Fairbanks, Morse & Co., Chicago, Ill.
Fasco Industries, Inc., Rochester, N. Y.
Franklin Electric Co., Inc., Bluffton, Ind.
General Die & Stamping Co., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Holtzer-Cabot Div. National Pneumatic Co., Inc., Boston, Mass.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jack & Heintz, Inc., Cleveland, Ohio.
Kingston-Conley Div., Hoover Co., North Plainfield, N. J.
Lamb Electric Co., Kent, Ohio.
Leland Electric Co., Div. American Machine & Foundry Co., Dayton, Ohio.
Marathon Electric Mfg. Corp., Wausau, Wis.
Marco Industries, Inc., DePew, N. Y.
Master Electric Co., Dayton, Ohio.
Morey, Dan, Los Angeles, Calif.
Ohio Electric Mfg. Co., Cleveland, Ohio.
Packard Electric Div., General Motors, Corp., Warren, Ohio.
Peerless Electric Co., Warren, Ohio.
Redmond Co., Inc., Owosso, Mich.
Reuland Elec. Co., Alhambra, Calif.
Reynolds Electric Co., River Grove, Ill.
Robbins & Myers, Inc., Springfield, Ohio.
Rotor Corp., Dayton, Ohio.
Signal Electric Mfg. Co., Menominee, Mich.
Small Motors, Inc., Chicago, Ill.
Smith Corp., A. O., Milwaukee, Wis.
Speedway Mfg. Co., Cicero, Ill.
Sprague Products Co., North Adams, Mass.
Sutton Corp., O. A., Wichita, Kans.
Torq Electric Corp., Bedford, Ohio.
U.S. Electrical Motors, Inc., Los Angeles, Calif.
Wagner Electric Corp., St. Louis, Mo.
Westinghouse Electric Corp., Pittsburgh, Pa.
Whirlaway Motors, Tippecanoe City, Ohio.

1 H.P. and Over

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Allis Co., Louis, Milwaukee, Wis.
Baldor Electric Co., St. Louis, Mo.
Bogue Electric Co., Paterson, N. J.
Brown-Brockmeyer Co., Inc., Dayton, Ohio.
Century Electric Co., St. Louis, Mo.
Crocker-Wheeler Div. Elliott Co., Ampere, N. J.
Delco Products Div., General Motors Corp., Dayton, Ohio.
Diehl Mfg. Co., Somerville, N. J.
Electric Machinery Mfg. Co., Minneapolis, Minn.
Electro Dynamic Div., Electric Boat Co., Bayonne, N. J.
Emerson Electric Mfg. Co., St. Louis, Mo.
Fairbanks, Morse & Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Holtzer-Cabot Div. National Pneumatic Co., Inc., Boston, Mass.
Ideal Electric & Mfg. Co., Mansfield, Ohio.
Imperial Electric Co., Akron, Ohio.
Kingston-Conley Div., Hoover Co., North Plainfield, N. J.
Leland Electric Co., Div. American Machine & Foundry Co., Dayton, Ohio.
Marathon Electric Mfg. Corp., Wausau, Wis.
Marble-Card Electric Co., Gladstone, Mich.
Master Electric Co., Dayton, Ohio.
Peerless Electric Co., Warren, Ohio.
Philadelphia Gear Works, Inc., Philadelphia, Pa. (Geared)
Reliance Elec. & Engr. Co., Cleveland, Ohio.
Robbins & Meyers, Inc., Springfield, Ohio.
Smith Corp., A. O., Milwaukee, Wis.
Star-Kimble Motor Div., Miehle Printing Press & Mfg. Co., Bloomfield, N.J.
Sterling Electric Motors, Inc., Los Angeles, Calif.
U. S. Electrical Motors, Inc., Los Angeles, Calif.
Valley Electric Co., St. Louis, Mo.
Wagner Electric Corp., St. Louis, Mo.
Westinghouse Electric Corp., Pittsburgh, Pa.

MOULDING AND TRIM, ORNAMENTAL, FOR CABINETS AND CASINGS

Alden Mfg. Co., Painesville, Ohio.
Allmetal Weatherstrip Co., Chicago, Ill.
Aluminum Co. of America, Pittsburgh, Pa.
Aluminum Goods Mfg. Co., Manitowoc, Wis. (Aluminum & stainless)
American Insulator Corp., New Freedom, Pa. (Plastic)
Brasco Mfg. Co., Harvey, Ill.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Dahlstrom Metallic Door Co., Jamestown, N. Y.
Detroit Moulding Div., L. A. Young Spring & Wire Corp., Detroit, Mich.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Empire Door Co., Inc., New York, N. Y.
Friedley-Voshardt Co., Chicago, Ill.
Herron-Zimmers Moulding Co., Detroit, Mich.
Jamestown Metal Corp., Jamestown, N. Y.
Kawneer Co., Niles, Mich.
Maysteel Products, Inc., Milwaukee, Wis.
Miller & Doing, Brooklyn, N. Y.
Pyramid Mouldings, Inc., Chicago, Ill.
Revere Copper & Brass Inc., New York, N. Y.
Rigidized Metals Corp., Buffalo, N. Y.
Sponge Rubber Products Co., Shelton, Conn. (Sponge rubber gaskets)
Werner Co., Inc., R. D., New York, N. Y.

MOULDINGS AND TRIM FOR SIDING AND SHINGLES

Allmetal Weatherstrip Co., Chicago, Ill. (Zinc)
Appleton Supply Co., Inc., Appleton, Wis. (Aluminum, zinc)
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Inland Steel Products Co., Milwaukee, Wis. (Corners)
Klauer Mfg. Co., Dubuque, Iowa.
Matthiessen & Hegeler Zinc Co., LaSalle, Ill.
New Delphos Mfg. Co., Delphos, Ohio. (Corners)
Penn Supply & Metal Corp., Philadelphia, Pa.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y. (Bull nose corner bead)
Sioux Steel Co., Sioux Falls, S. Dak.
Werner Co., R. D., Inc., New York, N. Y.

NAILS

Aluminum

Aluminum Co. of America, Pittsburgh, Pa.
Dickson Weatherproof Nail Co., Evanston, Ill.
Hassall, Inc., John, Brooklyn, N. Y.
Independent Nail & Packing Co., Bridgewater, Mass.
Kaiser Aluminum & Chemical Corp., Oakland, Calif.
Maze Co., W. H., Peru, Ill.
Nichols Wire & Aluminum Co., Davenport, Iowa.
Potts-Farrington Co., Philadelphia, Pa.
Quaker State Metals Co., Mountville, Pa.
Reynolds Metals Co., Louisville, Ky.

Brass or Copper

American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Copperweld Steel Co., Glassport, Pa.
Hassall, Inc., John, Brooklyn, N. Y.
Hussey & Co., C. G., Pittsburgh, Pa.
Independent Nail & Packing Co., Bridgewater, Mass.
Maze Co., W. H., Peru, Ill.

Hardened Masonry

American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Hillwood Mfg. Co., Cleveland, Ohio.
Independent Nail & Packing Co., Bridgewater, Mass.
Parker-Kalon Corp., New York, N. Y.
Rawlplug Co., Inc., New York, N. Y. (Bolts)
Tremont Nail Co., Wareham, Mass.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.
Wood Steel Co., Alan, Conshohocken, Pa.

Roofing

American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio. (Galv.)
Bethlehem Steel Co., Bethlehem, Pa.
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y. (Copper)
Continental Steel Corp., Kokomo, Ind. (Steel)
Copperweld Steel Co., Glassport, Pa. (Copper covered steel)
Deniston Co., Chicago, Ill. (Steel & aluminum)
Dickson Weatherproof Nail Co., Evanston, Ill. (Lead headed)
Division Lead Co., Chicago, Ill. (Lead)
Hassall, Inc., John, Brooklyn, N. Y. (Copper)
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Independent Nail & Packing Co., Bridgewater, Mass.
Inland Steel Products Co., Milwaukee, Wis. (Steel wire)
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Maze Co., W. H., Peru, Ill.
New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
Newport Steel Corp., Newport, Ky.
Quaker State Metals Co., Mounteville, Pa. (Aluminum)
Republic Steel Corp., Cleveland, Ohio. (Steel)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
Wickwire Spencer Steel Div. Colorado Fuel & Iron Corp., New York, N. Y. (Steel)

Screw, Hardened

American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Deniston Co., Chicago, Ill. (Pallet)
Dickson Weatherproof Nail Co., Evanston, Ill.
Hillwood Mfg. Co., Cleveland, Ohio. (Drive)
Independent Nail & Packing Co., Bridgewater, Mass.
Industrial Screw Co., Chicago, Ill.
Maze Co., W. H., Peru, Ill.
Parker-Kalon Corp., New York, N. Y.

Stainless Steel

American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Dickson Weatherproof Nail Co., Evanston, Ill.
Hassall, Inc., John, Brooklyn, N. Y.
Independence Nail & Packing Co., Bridgewater, Mass.
Maze Co., W. H., Peru, Ill.
Republic Steel Corp., Cleveland, Ohio.
Star Stainless Screw Co., Paterson, N. J.
Tremont Nail Co., Wareham, Mass.

Zinc Coated

American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
Continental Steel Corp., Kokomo, Ind.
Dickson Weatherproof Nail Co., Evanston, Ill.
Hassall, Inc., John, Brooklyn, N. Y.
Independent Nail & Packing Co., Bridgewater, Mass.
Inland Steel Products Co., Milwaukee, Wis.
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Maze Co., W. H., Peru, Ill.
New Delphos Mfg. Co., Delphos, Ohio.
Quaker State Metals Co., Mounteville, Pa.
Republic Steel Corp., Cleveland, Ohio.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
Tremont Nail Co., Wareham, Mass.
Wheeling Steel Corp., Wheeling, W. Va.

NIBBLERS

See Machines, Nibbling

NICKEL AND NICKEL ALLOY SHEETS

See Sheets, Metal, Special Metal

NIGHT AIR FANS

See Fans, Night Air Cooling

NOZZLES, OIL BURNER

Balloffet Dies & Nozzle Co., Inc., Guttenberg, N. J.
Benjamin Air Rifle Co., St. Louis, Mo.
Boston Machine Works Co., Lynn, Mass. (Also nozzle kit)
Delavan Mfg. Co., Des Moines, Iowa.
Hago Products, Irvington, N. J.
Hasko Utilities Co., New York, N. Y.
Monarch Mfg. Works, Inc., Philadelphia, Pa.
Steinen Mfg. Co., Wm., Newark, N. J.

NOZZLES, SPRAY, WATER

American Cooling Tower Co., Kansas City, Mo.
Balloffet Dies & Nozzle Co., Inc., Guttenberg, N. J.
Benjamin Air Rifle Co., St. Louis, Mo.
Binks Mfg. Co., Chicago, Ill.
Blower Application Co., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
Chain Belt Co., Milwaukee, Wis.
Clarage Fan Co., Kalamazoo, Mich.
Delavan Mfg. Co., Des Moines, Iowa.
Handelan Air Washer Co., Minneapolis, Minn.
Link-Belt Co., Chicago, Ill.
Maid-O'-Mist, Inc., Chicago, Ill.
Marley Co., Inc., Kansas City, Kans.
Marlocello & Co., Jos. A., Philadelphia, Pa.
Monarch Mfg. Works, Inc., Philadelphia, Pa.
Phillips Cooling Tower Co., Inc., Brooklyn, N. Y.
Plummer Spray Equipment Co., Napoleon, Ohio.
Rega Mfg. Co., Rochester, N. Y.
Ross Sprinkler Co., Pasadena, Calif.
Spray Engineering Co., Somerville, Mass.
Spraying Systems Co., Bellwood, Ill.
Steinen Mfg. Co., Wm., Newark, N. J.
Supreme Electric Products Corp., Rochester, N. Y.
Thermal Industries, Indio, Calif.

U. S. Gutta Percha Paint Co., Providence, R. I.
Water Cooling Corp., New York, N. Y.
Water Cooling Equipment Corp., St. Louis, Mo.
Yarnall-Waring Co., Philadelphia, Pa.

ODOR ADSORBERS

See Adsorbers, Odor

OIL BURNER CONTROLS

See Controls; Control Systems

OIL BURNER FITTINGS AND ACCESSORIES

See Fittings and Accessories, Oil Burner; Filters; Gauges; Nozzles

OIL BURNERS

See Burners, Oil

ORNAMENTS, SHEET METAL

See Mouldings and Trim, Ornamental

PAINT, ROOFING

American-Marietta Co., Chicago, Ill.
Baer Bros., New York, N. Y.
Barrett Div., Allied Chemical & Dye Corp., New York, N. Y. (Pitch base)
Blue Ridge Talc Co., Inc., Henry, Va.
Cabot, Inc., Samuel, Boston, Mass.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Carter Paint Co., Liberty, Ind.
Champion Bronze Powder & Paint Co., Chicago, Ill.
Cheesman-Elliot Co., Inc., Brooklyn, N. Y.
Clinton Metallic Paint Co., Clinton, N. Y. (Red metallic)
Continental Products Co., Euclid, Ohio.
Debevoise Co., Brooklyn, N. Y.
Devoe & Raynolds Co., Inc., New York, N. Y.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
Eagle-Picher Co., Cincinnati, Ohio.
Flintkote Co., New York, N.Y.
Glidden Co., Cleveland, Ohio.
Hetzel Roofing Products Co., Newark, N. J.
Horn Co., Inc., A. C., Long Island City, N. Y.
Illinois Bronze Powder Co., Inc., Chicago, Ill.
Inter-Coastal Paint Co., East St. Louis, Ill.
Iowa Paint Mfg. Co., Des Moines, Iowa. (Asphalt)
Koppers Co., Inc., Pittsburgh, Pa.
Lastik Products Co., Inc., Pittsburgh, Pa. (Asphalt & fiber)
Lehon Co., Chicago, Ill.
Lexington Supply Co., Cleveland, Ohio.
Lucas & Co., Inc., John, Philadelphia, Pa.
Metropolitan Refining Co., Inc., Long Island City, N. Y.
Midland Paint & Varnish Co., Cleveland, Ohio.
Mortell Co., J. W., Kankakee, Ill.
National Mfg. Corp., Tonawanda, N. Y.
Nebel Mfg. Co., Cleveland, Ohio.
North American Mogul Products Co., Cleveland, Ohio.
Ohmlac Paint & Refining Co., Chicago, Ill. (Asphalt)
Pabco Products, Inc, San Francisco, Calif.
Pecora Paint Co., Philadelphia, Pa.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Potts-Farrington Co., Philadelphia, Pa.
Presstite Engineering Co., St. Louis, Mo.
Reilly Tar & Chemical Corp., Indianapolis, Ind.
Reynolds Metals Co., Louisville, Ky.
Ruberoid Co., New York, N. Y.
Rutland Fire Clay Co., Rutland, Vt. (Asphalt)
S. O. S. Products Co., Inc., Brooklyn, N. Y.
Sherwin-Williams Co., Cleveland, Ohio.
Sipe & Co., James B., Pittsburgh, Pa.
Sonneborn Sons, Inc., L., New York, N. Y.
Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
Tamms Industries Inc., Chicago, Ill.
Thompson & Co., Oakmont, Pa.
Toch Bros., Inc., Staten Island, N. Y.
Tropical Paint & Oil Co., Cleveland, Ohio.
Truscon Laboratories, Detroit, Mich.

PAINT, SHEET METAL

(Aluminum, Finish Coat, Prime Coat, etc.)

American-Marietta Co., Chicago, Ill. (Aluminum, prime & finish coat)
Atlas Powder Co., North Chicago, Ill.
Baer Bros., New York, N. Y. (Aluminum)
Barreled Sunlight Paint Co., Providence, R.I. (Aluminum, finish coat)
Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
Blue Ridge Talc Co., Inc., Henry, Va.
Cabot, Inc., Samuel, Boston, Mass. (Aluminum, metal protecting)
Calbar Paint & Varnish Co., Philadelphia, Pa. (Aluminum, finish coat)
Carboline Co., St. Louis, Mo. (Aluminum, finish coat & prime coat)
Carey Co., Philip, Cincinnati, Ohio. (Aluminum)
Carter Paint Co., Liberty, Ind.
Champion Bronze Powder & Paint Co., Chicago, Ill. (Self-spraying bombs, all colors)
Cheesman-Elliot Co., Inc., Brooklyn, N. Y.
Continental Products Co., Euclid, Ohio. (Aluminum, finish coat)
Coopers Creek Chemical Corp., West Conshohocken, Pa. (Aluminum, finish coat)
Cordo Chemical Corp., Norwalk, Conn. (Acid and alkali resistant coatings)
Corrosite Corp., New York, N. Y. (Plastic)
Debevoise Co., Brooklyn, N. Y. (Prime coat & finish coat)
Devoe & Raynolds Co., Inc., New York, N. Y. (Aluminum, finish coat)
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (Aluminum, prime coat & finish coat)
Eagle-Picher Co., Cincinnati, Ohio. (Aluminum, finish coat)
Flood Co., Hudson, Ohio.
Glidden Co., Cleveland, Ohio. (Aluminum, finish coat)
Hague & Co., Alfred, Brooklyn, N. Y. (Aluminum, finish coat)
Hetzel Roofing Products Co., Newark, N. J. (Aluminum, finish coat)
Hilo Varnish Corp., Everett, Mass. (Zinc chromate)
Horn Co., Inc., A. C., Long Island City, N. Y. (Aluminum, finish coat)
Illinois Bronze Powder Co., Inc., Chicago, Ill. (Aluminum)
Inter-Coastal Paint Co., East St. Louis, Ill. (Prime coat, finish coat & sound deadening)
Iowa Paint Mfg. Co., Des Moines, Iowa.
Irvington Varnish & Insulator Co., Irvington, N. J. (Finish coat)
Koppers Co., Inc., Pittsburgh, Pa. (Aluminum, finish coat)
Lastik Products Co., Inc., Pittsburgh, Pa. (Aluminum, prime coat & finish coat)
Lehon Co., Chicago, Ill. (Aluminum)
Lucas & Co., Inc., John, Philadelphia, Pa.
Maas & Waldstein Co., Newark, N. J.
Markal Co., Chicago, Ill.
Midland Paint & Varnish Co., Cleveland, Ohio. (Aluminum, finish coat)
National Engineering Products, Inc., Washington, D. C.
National Lead Co., New York, N. Y. (Prime, finish coat)
National Mfg. Corp., Tonawanda, N. Y. (Aluminum)
Nebel Mfg. Co., Cleveland, Ohio. (Aluminum, finish coat)
North American Mogul Products Co., Cleveland, Ohio. (Finish coat).
O'Brien Corp., South Bend, Ind. (Aluminum, finish coat & prime coat)
Ohmlac Paint & Refining Co., Chicago, Ill. (Finish coat)
Pabco Products Inc., San Francisco, Calif. (Aluminum, prime coat & finish coat)
Patterson-Sargent Co., Cleveland, Ohio.
Pecora Paint Co., Philadelphia, Pa. (Aluminum, finish coat).
Pittsburgh Plate Glass Co., Pittsburgh, Pa. (Aluminum, finish coat)
Presstite Engineering Co., St. Louis, Mo. (Aluminum)
Quigley Co., Inc., New York, N. Y. (Aluminum, finish coat)
Reilly Tar & Chemical Corp., Indianapolis, Ind.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Robertson Co., H. H., Pittsburgh, Pa.
Rust-Oleum Corp., Evanston, Ill. (Aluminum, prime coat, finish coat & rust preventive coatings)
Rutland Fire Clay Co., Rutland, Vt. (Prime coat)
S. O. S. Products Co., Inc., Brooklyn, N. Y. (Aluminum)
Sherwin-Williams Co., Cleveland, Ohio. (Aluminum)
Sipe & Co., James B., Pittsburgh, Pa. (Aluminum, prime coat & finish coat)
Slip-On, Inc., New York, N. Y.
Sonneborn Sons, Inc., L., New York, N. Y. (Aluminum, finish coat)
Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
Speco, Inc., Cleveland, Ohio (Aluminum)
Tamms Industries, Inc., Chicago, Ill. (Finish coat)
Thompson & Co., Oakmont, Pa. (Aluminum, finish coat)
Toch Brothers, Inc., Staten Island, N. Y. (Finish coat)
Tropical Paint & Oil Co., Cleveland, Ohio. (Aluminum, finish coat)
Truscon Laboratories, Detroit, Mich. (Aluminum, prime coat & finish coat)

Turco Products, Inc., Los Angeles, Calif.
United Chromium, Inc., New York, N. Y. (Aluminum, prime coat, finish coat)
United Gilsonite Laboratories, Scranton, Pa.
United States Stoneware Co., New York, N. Y. (Aluminum, finish coat)
Wilbur & Williams Co., Brighton, Mass.

PAINT SPRAY GUNS

See Guns, Spray, Paint

PAPER, ASBESTOS

Acme Asbestos Covering & Flooring Co., Chicago, Ill.
Alfol Div., Reflectal Corp., New York, N.Y.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Johns-Manville, New York, N. Y.
Keasbey & Mattison Co., Ambler, Pa.
Norristown Magnesia & Asbestos Co., Norristown, Pa.
Ruberoid Co., New York, N. Y.
Sall Mountain Co., Hamilton, Ohio.
Standard Asbestos Mfg. Co., Chicago, Ill.
Wilson, Inc., Grant, Chicago, Ill.

PASTE, ASBESTOS PAPER

Acme Asbestos Covering & Flooring Co., Chicago, Ill.
Arabol Mfg. Co., New York, N. Y. (Insulation adhesive)
Clark Stek-O Corp., Rochester, N. Y.
Norristown Magnesia & Asbestos Co., Norristown, Pa.
Rutland Fire Clay Co., Rutland, Vt.
Sall Mountain Co., Hamilton, Ohio.
Standard Asbestos Mfg. Co., Chicago, Ill.
Western Mineral Products Co., Minneapolis, Minn.
Wilson, Inc., Grant, Chicago, Ill.

PATTERNS, BLUE PRINT, ELBOWS, SKYLIGHTS AND FITTINGS

Gray, G. L., New Haven, Conn.

PERFORATED METAL

See Metals, Perforated, Sheet and Plate

PILLOW BLOCKS

See Bearings, Pillow Block

PILOT LIGHTS

See Controls, Pilots, Gas Burner

PIPE AND FITTINGS

Conductor

Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
Alabama Metal Lath Co., Birmingham, Ala. (Steel & copper)
American Metal Products, Los Angeles, Calif. (Alum.)
Barnes Metal Products Co., Chicago, Ill.
Berger Bros. Co., Philadelphia, Pa.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Carlon Products, Cleveland, Ohio. (Plastic)
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Downs-Smith Brass & Copper Co., New York, N. Y. (Copper)
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
Globe Iron Roofing & Corrugating Co. Newport, Ky.
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Inland Steel Products Co., Milwaukee, Wis. (Copper & galv.)
Johns-Manville, New York, N. Y.
Klauer Mfg. Co., Dubuque, Iowa.
Krauser-Boyd, Inc., North Tonawanda, N. Y.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis. (Galv. steel)
Lamb & Ritchie Co., Cambridge, Mass. (Galvanized & copper)
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif. (Galv.)
Lyon, Conklin & Co., Inc., Baltimore, Md.
Matthiessen & Hegeler Zinc Co., La Salle, Ill. (Zinc)
Miller & Doing, Brooklyn, N. Y.
New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
Newport Steel Corp., Newport, Ky.
Northwest Metal Products, Inc., Seattle, Wash. (Galv. & copper)
Obdyke, Inc., B. P., Philadelphia, Pa. (Copper, galv. & stainless steel)
Overly Mfg. Co., Greensburg, Pa.
Peacard Co., M. A., Boston, Mass.
Penn Supply & Metal Corp., Philadelphia, Pa. (Alum., copper, galv.)
Quaker State Metals Co., Mountville, Pa. (Aluminum)
Reeves Steel & Mfg. Co., Dover, Ohio. (Galv. steel)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Riggin Metal Products, Inc., Kankakee, Ill.
Roofing & Supply Co., Chattanooga, Tenn. (Steel, copper)
St. Paul Corrugating Co., St. Paul, Minn. (Galv. steel)
Schecter Bros. Co., Philadelphia, Pa. (Galv. steel & copper)
Schoedinger, F. O., Columbus, Ohio. (Galv. stainless steel, & copper)
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sheet Metal Products Co., Peoria, Ill.
Souther Iron Co., E. E., St. Louis, Mo. (Galv.)
Thor Metal Products Co., Inc., Syracuse, N.Y. (Galv. & copper)
Tiffin Art Metal Co., Tiffin, Ohio. (Galv., copper, stainless steel, aluminum)
Wallace Co., William, Metalbestos Div., Belmont, Calif.
Wheeling Corrugating Co., Wheeling, W. Va. (Galv. steel)
York Corrugating Co., York, Pa. (Copper & galv.)

Furnace

Acer & Whedon, Inc., Medina, N. Y.
Acme Furnace Fitting Co., Chicago, Ill. (Galv. & aluminum)
Acme Mfg. Co., Philadelphia, Pa.
Adelta Mfg. Co., Inc., Philadelphia, Pa.
Aireflo Furnace Pipe Co., Van Dyke, Mich.
Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
Armstrong Furnace Co., Columbus, Ohio.
Baum Heating, Inc., J. H., Youngstown, Ohio.
Berger Furnace Mfg., Co., Pittsburgh, Pa.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Champion Furnace Pipe Co., Peoria, Ill.
Char-Gale Mfg. Co., Minneapolis, Minn.
Chicago Furnace Supply Co., Chicago, Ill.
Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Corbman Bros., Inc., Philadelphia, Pa.
Detroit Safety Furnace Pipe Co., Detroit, Mich.
Eisbach, Albert N., Dubuque, Iowa.
Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
Excelsior Steel Furnace Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Gary Steel Products Co., Gary, Ind.
Grand Island Furnace & Supply Co., Grand Island, Nebr.
Gray Metal Products, Inc., Rochester, N. Y.
Green Colonial Furnace Co., Des Moines, Iowa.
Henry Furnace Co., Medina, Ohio.
Home Furnace Co., Holland, Mich.
Howes-Woods Co., Cambridge, Mass.
Hugert Mfg. Co., Medina, Ohio.
Inland Steel Products Co., Milwaukee, Wis.
International Heater Co., Utica, N. Y.
J & J Sheet Metal Co., Van Dyke, Mich.
Jettronaire, Inc., McKeesport, Pa.
Johns-Manville, New York, N. Y.
Keith Furnace Co., Des Moines, Iowa.
Krauser-Boyd, Inc., North Tonawanda, N. Y.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lennox Furnace Co., Marshalltown, Iowa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Lyon, Conklin & Co., Inc., Baltimore, Md.
Made-Rite Co., Inc., Newport, Ky.
Majestic Co., Inc., Huntington, Ind.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co., Marshall, Mich.
Metalmen, Inc., Chicago, Ill.
Meyer & Bro. Co., F., Peoria, Ill.
Moncrief Furnace Co., Atlanta, Ga.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Northwest Metal Products, Inc., Seattle, Wash.
Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Peacard Co., M. A., Boston, Mass.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Penn Supply & Metal Corp., Philadelphia, Pa.
Perfection Furnace Pipe Co., Toledo, Ohio.
Portland Stove Foundry Co., Portland, Maine
Reeves Steel & Mfg. Co., Dover, Ohio.
Riggin Metal Products, Kankakee, Ill.
Roofing & Supply Co., Chattanooga, Tenn.
Round Oak Co., Inc., of Indiana, Dowagiac, Mich.
St. Clair Metal Products Co., Cleveland, Ohio.
Schecter Bros. Co., Philadelphia, Pa.
Schoedinger, F. O., Columbus, Ohio.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.

Sheet Metal Specialty Div., Follansbee Steel Corp., Pittsburgh, Pa.
Sioux Steel Co., Sioux Falls, S. D.
Skinner Htg. & Vent. Co., Heater Div. of St. Louis Blow Pipe & Heater Co., Inc., St Louis, Mo.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Standard Furnace Supply Co., Ltd., Omaha, Nebr.
Stratton & Terstegge Co., Louisville, Ky.
Superior Products Co., Omaha, Nebr.
Superior Safety Furnace Pipe Co., Detroit, Mich.
Thor Metal Products Co., Inc., Syracuse, N. Y.
Tiffin Art Metal Co., Tiffin, Ohio.
Tri-State Heating Supply, Inc., Ft. Wayne, Ind.
United States Register Co., Battle Creek, Mich.
Waterman-Waterbury Co., Minneapolis, Minn.
Waverly Heating Supply Co., Boston, Mass.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheelock Co., Geo. F., Birmingham, Ala.
Wilder Products Co., Springfield, Ohio.
Wallace Co., William, Metalbestos Div., Belmont, Calif.
Williamson Heater Co., Cincinnati, Ohio.
Youngstown Furnace Co., Youngstown, Ohio.

Smoke

Acer & Whedon, Inc., Medina, N. Y.
Acme Furnace Fitting Co., Chicago, Ill.
Acme Mfg. Co., Philadelphia, Pa.
Adelta Mfg. Co., Inc., Philadelphia, Pa. (Galv. & black)
Aireflo Furnace Pipe Co., Van Dyke, Mich.
Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
Armstrong Furnace Co., Columbus, Ohio.
Baum Heating, Inc., J. H., Youngstown, Ohio.
Berger Furnace Mfg., Co., Pittsburgh, Pa.
Bieler & Son, L., Long Island City, N. Y.
Bovee Furnace Works, Waterloo, Iowa. (Cast Iron)
Braden Mfg. Co., Inc., Terre Haute, Ind.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Champion Furnace Pipe Co., Peoria, Ill.
Char-Gale Mfg. Co., Minneapolis, Minn.
Chicago Furnace Supply Co., Chicago, Ill.
Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Condensation Engineering Corp., Chicago, Ill.
Corbman Bros., Inc., Philadelphia, Pa.
Detroit Safety Furnace Pipe Co., Detroit, Mich.
Eisbach, Albert N., Dubuque, Iowa.
Excelsior Steel Furnace Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Gary Steel Products Co., Gary, Ind.
Grand Island Furnace & Supply Co., Grand Island, Nebr.
Green Colonial Furnace Co., Des Moines, Iowa.
Henry Furnace Co., Medina, Ohio.
Home Furnace Co., Holland, Mich.
Howes-Woods Co., Cambridge, Mass.
Hugert Mfg Co., Medina, Ohio.
Inland Steel Products Co., Milwaukee, Wis.
International Heater Co., Utica, N. Y.
J & J Sheet Metal Co., Van Dyke, Mich.
Jettronaire, Inc., McKeesport, Pa.
Keith Furnace Co., Des Moines, Iowa.
Krauser-Boyd, Inc., North Tonawanda, N. Y.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lennox Furnace Co., Marshalltown, Iowa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif. (Galv.)
Lyon, Conklin & Co., Inc., Baltimore, Md.
Made-Rite Co., Inc., Newport, Ky.
Majestic Co., Inc., Huntington, Ind.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co., Marshall, Mich.
Metalmen, Inc., Chicago, Ill.
Meyer & Bro. Co., F., Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Northwest Metal Products, Inc., Seattle, Wash. (Black & galv.)
Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Peacard Co., M. A., Boston, Mass.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Penn Supply & Metal Corp., Philadelphia, Pa.
Perfection Furnace Pipe Co., Toledo, Ohio.
Portland Stove Foundry Co., Portland, Maine.
Reeves Steel & Mfg. Co., Dover, Ohio.
Riggin Metal Products, Kankakee, Ill.
Roofing & Supply Co., Chattanooga, Tenn.
Round Oak Co., Inc., of Indiana, Dowagiac, Mich.
St. Clair Metal Products Co., Cleveland, Ohio.
Schecter Bros. Co., Philadelphia, Pa.
Schoedinger, F. O., Columbus, Ohio.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sheet Metal Specialty Div., Follansbee Steel Corp., Pittsburgh, Pa.
Sioux Steel Co., Sioux Falls, S. D.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Standard Furnace Supply Co., Ltd., Omaha, Nebr.
Stratton & Terstegge Co., Louisville, Ky.
Superior Products Co., Omaha, Nebr.
Thor Metal Products, Inc., Syracuse, N. Y.
Tri-State Heating Supply, Inc., Ft. Wayne, Ind.
United States Register Co., Battle Creek, Mich.
Waterman-Waterbury Co., Minneapolis, Minn.
Waverly Heating Supply Co., Boston, Mass.
Wheeling Corrugating Co., Wheeling, W. Va.
Wilder Products Co., Springfield, Ohio.
Wallace Co., William, Metalbestos Div., Belmont, Calif.
Williamson Heater Co., Cincinnati, Ohio.
Youngstown Furnace Co., Youngstown, Ohio.

PIPE LOCK FORMERS

See Machines, Lock Forming

PIPE AND FITTINGS, GAS VENT AND FLUE

Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
American Agile Corp., Bedford, Ohio. (Plastic)
American Metal Products, Los Angeles, Calif.
Baltimore Porcelain Steel Corp., Baltimore, Md. (Porcelain enamel)
Baum Heating, Inc., J. H., Youngstown, Ohio. (Galv.)
Bovee Furnace Works, Waterloo, Iowa.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Byers Co., A. M., Pittsburgh, Pa. (Wrought iron)
Char-Gale Mfg. Co., Minneapolis, Minn. (Blue and Galvanized)
Condensation Engineering Corp., Chicago, Ill. (Vitreous Enamel)
Enderle, Inc., Frank X., Los Angeles, Calif. (Galv & asbestos)
Excelsior Steel Furnace Co., Chicago, Ill. (Galvanized)
Excelsior Stove & Mfg. Co., Quincy, Ill. (Blue & galv.)
Henry Furnace Co., Medina, Ohio.
Heremetal Co., Minneapolis, Minn.
Johns-Manville, New York, N. Y. (Asbestos & cement)
Laclede Steel Co., St. Louis, Mo. (Butt Weld—wrought steel)
Peacard Co., M. A., Boston, Mass.
Penn Supply & Metal Corp., Philadelphia, Pa. (Galv., alum.)
St. Clair Metal Products Co., Cleveland, Ohio. (Black, galv., chrome)
Tri-State Heating Supply, Inc., Ft. Wayne, Ind. (Galv.)
Van-Packer Corp., Chicago, Ill. (Lightweight masonry)
Wilder Products Co., Springfield, Ohio.
Wallace Co., William, Metalbestos Div., Belmont, Calif.
Williamson Heater Co., Cincinnati, Ohio. (Galv.)

PIPE AND FITTINGS, SHEET METAL

See Ducts and Duct Fittings, Prefabricated

PITTSBURGH LOCK FORMING MACHINES

See Machines, Pittsburgh Lock Forming

PLASTIC TUBING

See Tubing, Plastic

PLATES, METAL

Alloy

Allegheny Ludlum Steel Corp., Pittsburgh, Pa (Stainless steel)
Aluminum Co. of America, Pittsburgh, Pa.
American Brass Co., Waterbury, Conn. (Copper)
Armco Steel Corp., Middletown, Ohio. (Stainless steel)
Belmont Smelting & Refining Wks., Inc., Brooklyn, N. Y. (Zinc, lead)
Bethlehem Steel Co., Bethlehem, Pa.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper and its alloys)
Division Lead Co., Chicago, Ill. (Lead, tin, zinc)
Dow Chemical Co., Midland, Mich. (Magnesium)
Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill. (Stainless clad)
Inland Steel Co., Chicago, Ill.
International Nickel Co., Inc., New York, N. Y. (Nickel & nickel alloys)
Jessop Steel Co., Washington, Pa. (Carbon, high speed)
Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Lukens Steel Co., Coatesville, Pa. (Nickel, chromium, copper, manganese, molybdenum, alloys)
Monarch Alloys, Ravenna, Ohio.

Revere Copper & Brass Inc., New York, N. Y. (Copper & copper base)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa. (Aluminum)
United States Steel Co., Pittsburgh, Pa.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel

Armco Steel Corp., Middletown, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill. (Stainless clad)
Inland Steel Co., Chicago, Ill.
International Steel Co., Evansville, Ind.
Jessop Steel Co., Washington, Pa.
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Lukens Steel Co., Coatesville, Pa.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa.
Wood Steel Co., Alan, Conshohocken, Pa.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

Wrought Iron

Byers Co., A. M., Pittsburgh, Pa.

POLISHERS

See Buffers, Grinders, Polishers and Sanders

POWER SHEARS

See Machines, Sheet Metal, Shears

PRECIPITATORS, ELECTROSTATIC

See Filters, Air, Electrostatic

PREFABRICATED DUCTS

See Ducts and Duct Fittings, Prefabricated

PRESSES

See Machines, Sheet Metal, Presses

PROPELLER FANS

See Fans, Propeller Type

PROTECTIVE COATING

See Waterproofing, Coating Materials

PSYCHROMETERS, SLING AND HAND ASPIRATED

Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Foxboro Co., Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
G. M. Mfg. Co., New York, N. Y.
General Scientific Equipment Co, Philadelphia, Pa.
H-B Instrument Co., Philadelphia, Pa.
Hill & Co., E. Vernon, Chicago, Ill.
Johnson Service Co., Milwaukee, Wis.
Moeller Instrument Co., Richmond Hill, N. Y.
Palmer Thermometers, Inc., Norwood, Cincinnati, Ohio.
Philadelphia Thermometer Co., Philadelphia, Pa.
Precision Thermometer & Instrument Co., Philadelphia, Pa.
Taylor Instrument Companies, Rochester, N. Y.
Weksler Thermometer Corp., New York, N. Y.
Weston Electrical Instrument Corp., Newark, N. J.

PULLEYS, FAN AND MOTOR

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
American Pulley Co., Philadelphia, Pa.
Browning Mfg. Co., Inc., Maysville, Ky.
Chicago Die Casting Co., Chicago, Ill.
Congress Drives, Div. Tann Corp., Detroit, Mich.
Dayton Rubber Co., Dayton, Ohio.
Dick Co., Inc., R. & J., Passaic, N. J.
Dodge Mfg. Corp., Mishawaka, Ind.
Equi-Dyne, Inc., Chicago, Ill.
Gates Rubber Co., Denver, Colo.
Golden's Foundry & Machine Co., Columbus, Ga.
Jones Foundry & Machine Co., W. A., Chicago, Ill.
Lau Blower Co., Dayton, Ohio.
Lovejoy Flexible Coupling Co., Chicago, Ill.
Maurey Mfg. Corp., Chicago, Ill.
Mitchell Co., Inc., John E., Dallas, Texas. (V-groove)
Pyott Foundry & Machinery Co., Chicago, Ill.
Scientiae Tool Co., Dayton, Ohio.
Spun Steel Div., Automatic Steel Products, Inc., Canton, Ohio.
Utility Appliance Corp., Los Angeles, Calif.
W. C. Products, Inc., Santa Monica, Calif.
Webster Electric Co., Racine, Wis.
Wood's Sons Co., T. B., Chambersburg, Pa.

PULLEYS, FURNACE CHAIN

Hart & Cooley Mfg. Co., Holland, Mich.
Mueller Furnace Co., L. J., Milwaukee, Wis.
United States Register Co., Battle Creek, Mich.

PUMPS, FUEL, OIL BURNER

A-P Controls Corp., Milwaukee, Wis.
Barclay Co., Robt., Chicago, Ill.
Kraissl Co., Inc., Hackensack, N. J.
Polo Pump Co., Polo, Ill.
Ray Oil Burner Co., San Francisco, Calif. (Industrial)
Roper Corp., Geo. D., Rockford, Ill.
Sundstrand Machine Tool Co., Rockford, Ill.
Tuthill Pump Co., Chicago, Ill.
Viking Pump Co., Cedar Falls, Iowa.
Webster Electric Co., Racine, Wis.

PUMPS, RECIRCULATING, EVAPORATIVE COOLERS

Beckett & Co., Thomas, Dallas, Texas.
Buffalo Forge Co., Buffalo, N. Y.
Jabsco Pump Co., Burbank, Calif.
Kraissl Co., Inc., Hackensack, N. J.
Little Giant Vaporizer Co., Oklahoma City, Okla.
Morey, Dan, Los Angeles, Calif.
Myers & Bro. Co., F. E., Ashland, Ohio.
National Engineering & Mfg. Co., Kansas City, Mo.
Robbins & Myers, Inc., Springfield, Ohio.
Southern Air Conditioning Mfg. Co., Fort Worth, Texas.
Yeomans Bros. Co., Melrose Park, Ill.

PUNCHES AND SHEARS COMBINED, LEVER OPERATED

Berkroy Products, Inc., Burbank, Calif.
Buffalo Forge Co., Buffalo, N. Y.
Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Heartley Machine & Tool Co., Toledo, Ohio.
Hendley & Whittemore Co., Beloit, Wis.
Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
National Machine Tool Co., Racine, Wis.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Rotex Punch Co., Oakland, Calif.
Weiss & Co., H., New York, N. Y.

PUNCHES, BENCH

Berkroy Products, Inc., Burbank, Calif.
Buffalo Forge Co., Buffalo, N. Y.
Champion Blower & Forge Co., Lancaster, Pa.
Diamond Machine Tool Co., Los Angeles, Calif.
Heartley Machine & Tool Co., Toledo, Ohio.
Hendley & Whittemore Co., Beloit, Wis.
Kidder Mfg. Co., J. F., Burlington, Vt.
Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
National Machine Tool Co., Racine, Wis.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Rotex Punch Co., Oakland, Calif.
Thor Tool & Die Co., San Leandro, Calif. (Clip punches & dies)
Weiss & Co., H., New York, N. Y.
Whitney Mfg. Co., W. A., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia, Pa. (Turret)

PUNCHES, COMBINATION HAND AND BENCH

Champion Blower & Forge Co., Lancaster, Pa.
Heartley Machine & Tool Co., Toledo, Ohio.
Hendley & Whittemore Co., Beloit, Wis.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Parker-Kalon Corp., New York, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Rotex Punch Co., Oakland, Calif.
Weiss & Co., H., New York, N. Y.
Whitney Mfg. Co., W. A., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia, Pa.

PUNCHES, HAND

Berkroy Products, Inc., Burbank, Calif.

Buffalo Forge Co., Buffalo, N. Y.
Champion Blower & Forge Co., Lancaster, Pa.
Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Crescent Tool Co., Jamestown, N. Y.
Damascus Steel Products Corp., Rockford, Ill.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Hendley & Whittemore Co., Beloit, Wis.
Ingels Elbow Machine Corp., Chicago, Ill.
Kidder Mfg. Co., J. F., Burlington, Vt.
Niagara Machine & Tool Works, Buffalo, N. Y.
Parker-Kalon Corp., New York, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Penn Tool Co., Philadelphia, Pa.
Reiner & Campbell Co., Inc., Newark, N. J.
Rotex Punch Co., Oakland, Calif.
Snap-On Tools Corp., Kenosha, Wis.
Stanley Tools, New Britain, Conn.
Weiss & Co., H., New York, N. Y.
West Pacific Sales Co., Portland, Ore.
Whitney Mfg. Co., W. A., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia, Pa. (Turret)

QUADRANTS, DAMPER

See Regulators

RECORDERS, HUMIDITY, PORTABLE

Bristol Co., Waterbury, Conn.
Foxboro Co., Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
Leeds & Northrup Co., Philadelphia, Pa.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Taylor Instrument Companies, Rochester, N. Y.
Weksler Thermometer Corp., New York, N. Y.
Weston Electrical Instrument Corp., Newark, N. J.

RECORDERS, TEMPERATURE, PORTABLE

Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Bailey Meter Co., Cleveland, Ohio.
Bristol Co., Waterbury, Conn.
Defender Instrument & Regulator Co., St. Louis, Mo.
Dickson Co., Chicago, Ill.
Foxboro Co., Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
Leeds & Northrup Co., Philadelphia, Pa.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Moeller Instrument Co., Richmond Hill, N. Y.
Palmer Thermometers, Inc., Cincinnati, Ohio.
Preferred Utilities Mfg. Corp., New York, N. Y.
Taylor Instrument Companies, Rochester, N. Y.
Weksler Thermometer Corp., New York, N. Y.
Weston Electrical Instrument Corp., Newark, N. J.

REFRACTORIES

Amerform Corp., Philadelphia, Pa.
Armstrong Cork Co., Lancaster, Pa. (Insulating)
Babcock & Wilcox Co., Refractories Div., New York, N. Y.
Bird Archer Co., Philadelphia, Pa.
Bothfeld Refractories Co., Philadelphia, Pa.
Chicago Fire Brick Co., Chicago, Ill.
Durex Inc., Chicago, Ill.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Fireline Stove & Furnace Lining Co., Chicago, Ill. (For hearths and firepot linings)
Green Fire Brick Co., A. P., Mexico, Mo. (All types fire clay)
Iron-Hide Sales Co., Matawan, N.J.
Johns-Manville, New York, N. Y.
Kolb Refractories Co., Philadelphia, Pa.
Laclede-Christy Co., St. Louis, Mo. (Fire clay)
McLeod & Henry Co., Inc., Troy, N. Y.
Monogram Products Co., Inc., Philadelphia, Pa.
Pyrolite Products Co., Cleveland, Ohio.
Quigley Co., Inc., New York, N. Y.
Ramtite Co., Div. S. Obermayer Co., Chicago, Ill.
Rehm, R., St. Albans, N. Y. (Radiant)
Refractory & Insulation Corp., New York, N. Y.
Rex Roto Corp., Detroit, Mich.
Robinson Insulation Co., Great Falls, Mont. (Vermiculite)
Rutland Fire Clay Co., Rutland, Vt. (Retort Cement)
S. O. S. Products Co., Inc., Brooklyn, N. Y.
Standard Fuel Engineering Co., Detroit, Mich.
U. S. Stoneware Co., New York, N. Y.
Walsh Refractories Corp., St. Louis, Mo.

REFRIGERANTS

Ansul Chemical Co., Refrigeration Div., Marinette, Wis. (Methyl chloride, sulphur dioxide)
Dow Chemical Co., The, Midland, Mich.
du Pont de Nemours & Co., Inc., E. I. Kinetic Chemicals Div., Wilmington, Del. ("Freon" fluorinated hydro carbon refrigerants)
Eston Chemicals Div., American Potash & Chemicals Corp., Los Angeles, Calif.
Solvay Sales Div., Allied Chemical & Dye Corp., New York, N. Y.

REFRIGERATING UNITS

See Condensing Units, Refrigerating

REGISTER SEALS

See Seals for Registers

REGISTER SHIELDS

See Shields, Warm Air Register

REGISTERS, HEATING, VENTILATING AND AIR CONDITIONING

A & A Register Co., Cleveland, Ohio.
A-J Mfg. Co., Kansas City, Mo.
Air Control Products, Inc., Coopersville, Mich.
American Warming & Ventilating Co., Toledo, Ohio.
Auer Register Co., Cleveland, Ohio.
Barber-Colman Co., Rockford, Ill.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Best Register Co., Milwaukee, Wis.
Brandes Co., Madison, Wis. (Continuous slotted baseboard)
Brown Steel Tank Co., Minneapolis, Minn.
Carnes Co., W. R., Verona, Wis.
Char-Gale Mfg. Co., Minneapolis, Minn.
Controlair Mfg. Co., Los Angeles, Calif.
Diamond Mfg. Co., Wyoming, Pa.
Dole Valve Co., Chicago, Ill.
Empire Ventilation Equipment Co., Long Island City, N. Y.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Gerwin Industries, Michigan City, Ind.
Harrington & King Perforating Co., Chicago, Ill.
Harrison Sheet Steel Co., Chicago, Ill.
Hart & Cooley Mfg. Co., Holland, Mich.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Hendrick Mfg. Co., Carbondale, Pa.
Independent Register Co., Cleveland, Ohio.
Krauser-Boyd, Inc., North Tonawanda, N. Y.
Krueger Air Conditioning Co., Tucson, Ariz.
Lima Register Co., Lima, Ohio.
Louvra Corp., Union, N.J.
Metal Carrier Corp., Grand Rapids, Mich.
Midco Register Corp., St. Paul, Minn.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Patco Mfg. Co., Philadelphia, Pa.
Pennant Corp., Grand Rapids, Mich.
Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Roberts Co., S. R., Marshall, Mich.
Rock Island Register Co., Rock Island, Ill.
Smith Co., J. B., Philadelphia, Pa.
Standard Stamping & Perforating Co., Chicago, Ill.
Stewart Mfg., Co., Cedar Grove, N. J.
Titus, Inc., Waterloo, Iowa.
Titus Mfg., Corp., Waterloo, Iowa.
Tuttle & Bailey, Inc., New Britain, Conn.
United States Air Conditioning Corp., Minneapolis, Minn.
United States Register Co., Battle Creek, Mich.
Vectaire Mfg. Co., Melrose, Mass.
Wilde Register & Grille Co., Detroit, Mich.
Young Regulator Co., Cleveland, Ohio.

REGULATORS, DUCT DAMPER SETS

A-P Controls Corp., Milwaukee, Wis.
Acme Mfg. Co., Philadelphia, Pa.
Adams Co., Dubuque, Iowa.
Air Control Products, Inc., Coopersville, Mich.
Barber-Colman Co., Rockford, Ill.
Cole-Sewell Engineering Co., St. Paul, Minn. (Damper locks)
Controlair Mfg. Co., Los Angeles, Calif.
Duro-Dyne Corp., Hempstead, L.I., N. Y.
Fossum Mfg. Co., M. H., St. Paul, Minn.
Gerett Corp., M. A., Milwaukee, Wis.
Hart & Cooley Mfg. Co., Holland, Mich.
Kerentoff, G. L., Cincinnati, Ohio.

Martens & Stormoen, Boston, Mass.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Parker-Kalon Corp., New York, N. Y.
Perfex Corp., Milwaukee, Wis.
Severson Mfg. & Supply Co., Milwaukee, Wis.
United States Register Co., Battle Creek, Mich.
Young Regulator Co., Cleveland, Ohio.

REGULATORS, FURNACE DRAFT, MECHANICAL

Barber-Colman Co., Rockford, Ill.
Defender Instrument & Regulator Co., St. Louis, Mo.
Hart & Cooley Mfg. Co., Holland, Mich.
Hays Corp., Michigan City, Ind.
Little Janitor Furnace Clock Co., New York, N. Y.

RELAYS, ELECTRICAL

See Controls

REPAIRS, STOVE AND FURNACE

Adams Co., Dubuque, Iowa.
Banner Repair Parts Co., Youngstown, Ohio.
Brauer Supply Co., A. G., St. Louis, Mo.
Central Furnace & Stove Repair Co., St. Louis, Mo.
Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
Des Moines Furnace & Stove Repair Co., Des Moines, Iowa.
Eselgroth & Co., Newark, N. J.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Faultless Heater Corp., Cleveland, Ohio.
Foote Foundry Co., J. B., Fredericktown, Ohio.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Kramer Bros. Foundry Co., Dayton, Ohio.
Livingston, Inc., Marshall, Mich.
Metzner Stove Repair Co., Kansas City, Mo.
Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.
National Foundry & Furnace Co., Dayton, Ohio.
Northwestern Stove Repair Co., Chicago, Ill.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Peninsular Stove Co., Detroit, Mich.
Pittsburgh Furnace Parts Co., Pittsburgh, Pa.
Portland Stove Foundry Co., Portland, Maine.
Shamblen Furnace Parts Co., Pittsburgh, Pa.
Smith Furnace Co., New Castle, Pa.

RIDGE ROLL, SHEET METAL

Alabama Metal Lath Co., Birmingham, Ala. (Steel)
American Steel Band Co., Pittsburgh, Pa.
American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Barnes Metal Products Co., Chicago, Ill.
Berger Bros. Co., Philadelphia, Pa.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio. (Galv. stainless steel & copper)
Bethlehem Steel Co., Bethlehem, Pa.
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Inland Steel Products Co., Milwaukee, Wis. (Galv. & copper)
Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Klauer Mfg. Co., Dubuque, Iowa.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lyon, Conklin & Co., Inc., Baltimore, Md.
Matthiessen & Hegeler Zinc Co., La Salle, Ill. (Zinc)
New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
Newport Rolling Mill Co., Newport, Ky.
Nichols Wire & Aluminum Co., Davenport, Iowa. (Aluminum)
Northwest Metal Products, Inc., Seattle, Wash. (Galv. & copper)
Plasteel Products Co., Washington, Pa.
Reeves Steel & Mfg. Co., Dover, Ohio. (Galv. steel)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Riggin Metal Products, Kankakee, Ill.
St. Paul Corrugating Co., St. Paul, Minn. (Galv. steel)
Schoedinger, F. O., Columbus, Ohio. (Galv. & stainless steel, & copper)
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sioux Steel Co., Sioux City, S. D. (Galv. & copper)
Southbridge Roofing Co., Inc., Southbridge, Mass.
Souther Iron Co., E. E., St. Louis, Mo. (Galv.)
Southern States Iron Roofing Co., Savannah, Ga.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
Tiffin Art Metal Co., Tiffin, Ohio. (Galv. copper, stainless steel, aluminum)
United States Steel Co., Pittsburgh, Pa. (Galv. steel)
Van Noorden Co., E., Boston, Mass.
Wallace Co., William, Metalbestos Div., Belmont, Calif.
Wheeling Corrugating Co., Wheeling, W. Va. (Galv. steel)

RIDGE VENTILATORS

See Ventilators, Roof

RIVETS

Alloy

Bethlehem Steel Co., Bethlehem, Pa.
Clark Bros. Bolt Co., Milldale, Conn.
General Plate Div., Metals & Controls Corp., Attleboro, Mass. (Silver)
Harper Co., H. M., Morton Grove, Ill.
Hassall, Inc., John, Brooklyn, N. Y.
Huck Mfg. Co., Detroit, Mich. (Blind)
Republic Steel Corp., Cleveland, Ohio.
Townsend Co., New Brighton, Pa.
Townsend Co., Cherry Rivet Div., Santa Ana, Calif. (Blind)
Tubular Rivet & Stud Co., Wollaston, Mass.

Aluminum

Aluminum Co., of America, Pittsburgh, Pa.
Chicago Rivet & Machine Co., Bellwood, Ill.
du Pont de Nemours & Co., Inc. E. I., Wilmington, Del. (Explosive)
Goodrich Co., B. F., Akron, Ohio. (Blind)
Harper Co., H. M., Morton Grove, Ill.
Hassall, Inc., John, Brooklyn, N. Y.
Huck Mfg. Co., Detroit, Mich. (Blind)
Reynolds Metals Co., Louisville, Ky.
Southco Div., South Chester Corp., Philadelphia, Pa., (Blind)
Townsend Co., Cherry Rivet Div., Santa Ana, Calif. (Blind)
Tubular Rivet & Stud Co., Wollaston, Mass.

Brass or Copper

Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago Rivet & Machine Co., Bellwood, Ill.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (Explosive)
Goodrich Co., B. F., Akron, Ohio. (Blind-Brass)
Harper Co., H. M., Morton Grove, Ill.
Hassall, Inc., John, Brooklyn, N. Y.
Huck Mfg. Co., Detroit, Mich. (Blind)
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Taunton & Co., Inc., John H., New York, N. Y.
Townsend Co., New Brighton, Pa.
Tubular Rivet & Stud Co., Wollaston, Mass.

Iron

Chicago Rivet & Machine Co., Bellwood, Ill.
Hassall Inc., John, Brooklyn, N. Y.
Townsend Co., New Brighton, Pa.

Steel

Bethlehem Steel Co., Bethlehem, Pa.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cherry Rivet Co., Los Angeles, Calif. (Blind)
Chicago Rivet & Machine Co., Bellwood, Ill.
Clark Bros. Bolt Co., Milldale, Conn.
Goodrich Co., B. F., Akron, Ohio.
Hassall Inc., John, Brooklyn, N. Y.
Huck Mfg. Co., Detroit, Mich. (Blind)
Republic Steel Corp., Cleveland, Ohio.
Townsend Co., New Brighton, Pa.
Townsend Co., Cherry Rivet Div., Santa Ana, Calif. (Blind)
Tubular Rivet & Stud Co., Wollaston, Mass.

ROD, WELDING

Air Reduction Sales Co., New York, N. Y.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Agile Corp., Bedford, Ohio.
American Brass Co., Waterbury, Conn.
American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Arcos Corp., Philadelphia, Pa. (Stainless steel)
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chemalloy Associates, Santee, Calif.
Crucible Steel Co. of America, New York, N. Y. (Stainless steel)
Dow Chemical Co., Midland, Mich. (Magnesium)
Eutectic Welding Alloys Corp., Flushing, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Bros. Co., Troy, Ohio.

International Nickel Co., Inc., New York, N. Y. (Nickel & nickel alloys)
Linde Air Products Co., New York, N. Y.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metalloy Products Co., Los Angeles, Calif.
Modern Engineering Co., St. Louis, Mo.
Mueller Brass Co., Port Huron, Mich.
National Cylinder Gas Co., Chicago, Ill.
Page Steel & Wire Div., American Chain & Cable Co., Inc., Monessen, Pa.
Revere Copper & Brass Inc., New York, N.Y.
Sight Feed Generator Co., West Alexandria, Ohio.
Smith Corp., A. O., Milwaukee, Wis.
United Wire & Supply Corp., Providence, R. I.
Weiger Weed & Co., Div. Fansteel Metallurgical Corp., Detroit, Mich.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

ROOF CEMENT

See Cement, Roof

ROOFING, BUILT-UP

See Felt, Roofing

ROOFING, SHEET METAL

Aluminum

Aluminum Co., of America, Pittsburgh, Pa.
Cheney Flashing Co., Trenton, N. J.
Fingles Co., Baltimore, Md.
Kaiser Aluminum & Chemical Corp., Oakland, Calif.
Nichols Wire & Aluminum Co., Davenport, Iowa.
Overly Mfg. Co., Greensburg, Pa.
Penn Supply & Metal Corp., Philadelphia, Pa.
Quaker State Metals Co., Mountville, Pa.
Ralph Mfg. Co., Inc., Wadsworth, Ohio.
Reynolds Metals Co., Louisville, Ky.
Southern States Iron Roofing Co., Savannah, Ga.
Tiffin Art Metal Co., Tiffin, Ohio.

Copper

American Brass Co., Waterbury, Conn.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Edwards Mfg. Co., Cincinnati, Ohio.
Fingles Co., Baltimore, Md.
Hussey & Co., C. G., Pittsburgh, Pa.
Klauer Mfg. Co., Dubuque, Iowa.
Overly Mfg. Co., Greensburg, Pa.
Perkinson, William J., Chicago, Ill.
Revere Copper & Brass Inc., New York, N.Y.

Lead

Alpha Metals, Inc., Jersey City, N. J.
Division Lead Co., Chicago, Ill.
Empire Metal Co., Syracuse, N. Y.
Federated Metals Div. American Smelting & Refining Co., New York, N. Y.
Flemm Lead Co., Inc., Long Island City, N. Y.
Illinois Zinc Co., Chicago, Ill.
Kirk & Son, Morris P., Los Angeles, Calif. (copper, galv. iron)
National Lead Co., New York, N. Y.
Northwest Lead Co., Seattle, Wash.
Standard Rolling Mills, Inc., Brooklyn, N. Y.

Monel

Fingles Co., Baltimore, Md.
International Nickel Co., Inc., New York, N. Y.
Overly Mfg. Co., Greensburg, Pa.

Steel, Galvanized

Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
Continental Steel Corp., Kokomo, Ind.
Detroit Steel Products Co., Detroit, Mich.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Fingles Co., Baltimore, Md.
Goldsmith Metal Lath Co., Cincinnati, Ohio.
Granite City Steel Co., Granite City, Ill. (Corrugated)
Inland Steel Co., Chicago, Ill.
Inland Steel Products Co., Milwaukee, Wis.
International Steel Co., Evansville, Ind.
Klauer Mfg. Co., Dubuque, Iowa.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lyon, Conklin & Co., Inc., Baltimore, Md.
New Delphos Mfg. Co., Delphos, Ohio.
Newport Steel Corp., Newport, Ky.
Overly Mfg. Co., Greensburg, Pa.
Penn Supply & Metal Corp., Philadelphia, Pa.
Perkinson, William J., Chicago, Ill.
Plasteel Products Corp., Washington, Pa. (Protected)
Reeves Steel & Mfg. Co., Dover, Ohio.
Republic Steel Corp., Cleveland, Ohio.
Robertson Co., H. H., Pittsburgh, Pa. (Protected)
Roofing & Supply Co., Chattanooga, Tenn.
Sioux Steel Co., Sioux Falls, S. D.
St. Paul Corrugating Co., St. Paul, Minn.
Souther Iron Co., E. E., St. Louis, Mo.
Southern States Iron Roofing Co., Savannah, Ga.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
Tiffin Art Metal Co., Tiffin, Ohio.
Truscon Steel Co., Youngstown, Ohio. (Plain steel)
United States Steel Co., Pittsburgh, Pa.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.

Steel, Protective Coated

Airtherm Mfg. Co., St. Louis, Mo.
American Steel Band Co., Pittsburgh, Pa.
Fingles Co., Baltimore, Md.
Plasteel Products Corp., Washington, Pa.

Steel, Terne Plate

Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Fingles Co., Baltimore, Md.
Follansbee Steel Corp., Pittsburgh, Pa.
Inland Steel Products Co., Milwaukee, Wis.
Klauer Mfg. Co., Dubuque, Iowa.
Lyon, Conklin & Co., Inc., Baltimore, Md.
New Delphos Mfg. Co., Delphos, Ohio.
Roofing & Supply Co., Chattanooga, Tenn.
Sioux Steel Co., Sioux Falls, S. D.
United States Steel Co., Pittsburgh, Pa.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Metal & Mfg. Co., Moundsville, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel, Tin Plate

Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Inland Steel Products Co., Milwaukee, Wis.
Klauer Mfg. Co., Dubuque, Iowa.
Lyon, Conklin & Co., Inc., Baltimore, Md.
Perkinson, William J., Chicago, Ill.
Sioux Steel Co., Sioux Falls, S. D.
United States Steel Co., Pittsburgh, Pa.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

Zinc

Barnes Metal Products Co., Chicago, Ill.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Empire Metal Co., Syracuse, N. Y.
Illinois Zinc Co., Chicago, Ill.
Matthiessen & Hegeler Zinc Co., La Salle, Ill.
New Jersey Zinc Co., New York, N. Y.
Potts-Farrington Co., Philadelphia, Pa.
Roofing & Supply Co., Chattanooga, Tenn.

ROOF TRIM (MOULDINGS), STEEL, EAVES AND RAKES

Alabama Metal Lath Co., Birmingham, Ala.
Appleton Supply Co., Inc., Appleton, Wis. (Starter strip)
Inland Steel Products Co., Milwaukee, Wis. (Eaves)
Northwest Metal Products, Inc., Seattle, Wash.
Obdyke, Inc., B. P., Philadelphia, Pa.
Penn Supply & Metal Corp., Philadelphia, Pa.
Quaker State Metals Co., Mountville, Pa.

Reynolds Metals Co., Louisville, Ky. (Aluminum)
Sioux Steel Co., Sioux Falls, S. D.
Wheeling Steel Corp., Wheeling, W. Va.

ROOF VENTILATORS

See Ventilators, Roof

ROOM THERMOSTATS

See Controls, Thermostats

RULES, SLIDE, HEATING

Calculator Specialty Co., Chicago, Ill.
Climatemaker Heat Loss Calculator Co., Bloomington, Ill.
Des Moines Furnace & Stove Repair Co., Des Moines, Iowa.
Perrygraf Corp., Maywood, Ill.

RUST PROTECTION FOR METALS

See Chemicals, Rust Preventive

SANDERS

See Buffers, Grinders, Polishers and Sanders

SAVERS, HEAT

Autogas Co., Chicago, Ill.
Cary Mfg. Co., Waupaca, Wis.
Elmwood Mfg. Co., Detroit, Mich.
Gerhardt, W. F., Richmond, Va. (oil or gas)
Heatriever Div., Crane Equipment & Supply Co., Waterbury, Conn.
Rayfield Co., C. L., Chicago, Ill.

SAWS, BAND, SHEET METAL CUTTING

See Machines, Sheet Metal

SCREENS, SUN REFLECTING

Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
Kaiser Aluminum & Chemical Corp., Oakland, Calif.

SCREWS, SHEET METAL

All Metal Screw Products Co., Inc., New York, N. Y.
Aluminum Co. of America, Pittsburgh, Pa.
American Screw Co., Willimantic, Conn.
Clark Bros. Bolt Co., Milldale, Conn.
Continental Screw Co., New Bedford, Mass.
Elco Tool & Screw Corp., Rockford, Ill.
Independent Nail & Packing Co., Bridgewater, Mass.
Industrial Screw Co., Chicago, Ill.
National Lock Co., Inc., Rockford, Ill.
Parker-Kalon Corp., New York, N. Y.
Pheoll Mfg. Co., Chicago, Ill.
Rockford Screw Products, Co., Rockford, Ill.
Roofing & Supply Co., Chattanooga, Tenn.
Set Screw & Mfg. Co., Bartlett, Ill.
Shakeproof Div., Illinois Tool Wks., Chicago, Ill.
Star Stainless Screw Co., Paterson, N. J.
United States Register Co., Battle Creek, Mich.

SEALS FOR REGISTERS

Excel Heating & Air Conditioning Co., Chicago, Ill.

SEAMER MACHINES

See Machines, Seaming

SETTING DOWN MACHINES

See Machines, Setting Down

SHEARS AND PUNCHES COMBINED

See Punches and Shears Combined

SHEARS, HAND AND BENCH

See Snips and Shears, Bench and Hand

SHEETS, METAL

Aluminum

Aluminum Co. of America, Pittsburgh, Pa.
American Nickeloid Co., Peru, Ill.
Apollo Metal Works, Chicago, Ill.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Fairmont Aluminum Co., Fairmont, W. Va.
Kaiser Aluminum & Chemical Corp., Oakland, Calif.
Lustrik, Inc., Philadelphia, Pa.
Nichols Wire & Aluminum Co., Davenport, Iowa.
Quaker State Metals Co., Mountville, Pa.
Ralph Mfg. Co., Wadsworth, Ohio.
Revere Copper & Brass Inc., New York, N .Y. (Coiled sheets)
Reynolds Metals Co., Louisville, Ky. (Corrugated)
Rigidized Metals Corp., Buffalo, N. Y.
Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa.

Clad

Allegheny Ludlum Steel Corp., Pittsburgh, Pa. (Stainless steel)
Aluminum Co. of America, Pittsburgh, Pa. (Aluminum)
American Nickeloid Co., Peru, Ill. (Nickel, chromium, brass & copper)
Division Lead Co., Chicago, Ill. (Lead)
General Plate, Div. Metals & Controls Corp., Attleboro, Mass.
Ingersoll Steel Div. Borg-Warner Corp., Chicago, Ill.
Jessop Steel Co., Washington, Pa. (Stainless)
Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Lukens Steel Co., Coatesville, Pa. (Nickel, Monel, Inconel & stainless steel)
Rigidized Metals Corp., Buffalo, N. Y.
Sherman & Co., Flushing, N. Y. (Silver brazing alloys clad on non-ferrous metals)
Wood Steel Co., Alan, Conshohocken, Pa. (Stainless steel)

Copper

American Brass Co., Waterbury, Conn.
American Nickeloid Co., Peru, Ill.
Apollo Metal Works, Chicago, Ill.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cheney Flashing Co., Trenton, N. J.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Hussey & Co., C. G., Pittsburgh, Pa.
Revere Copper & Brass Inc., New York, N. Y.
Rigidized Metals Corp., Buffalo, N. Y.
Roofing & Supply Co., Chattanooga, Tenn.
Weirton Steel Co., Weirton, W. Va. (Electrolitic Zinc Coated)
Western Brass Mills, Metals Div. Olin Industries, Inc., East Alton, Ill.

Copper, Lead Coated

American Brass Co., Waterbury, Conn.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Hussey & Co., C. G., Pittsburgh, Pa.
Lamb & Ritchie Co., Cambridge, Mass.
Ledcote Products Co., Long Island City, N. Y.
Revere Copper & Brass Inc., New York, N. Y.
Rigidized Metals Corp., Buffalo, N. Y.
Roofing & Supply Co., Chattanooga, Tenn.

Lead

Alpha Metals, Inc., Jersey City, N. J.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Division Lead Co., Chicago, Ill.
Eagle-Picher Co., Cincinnati, Ohio.
Empire Metal Co., Syracuse, N. Y.
Federated Metals Div., American Smelting & Refining Co., New York, N. Y.
Flemm Lead Co., Inc., Long Island City, N. Y.
Glaser Lead Co., Inc., Brooklyn, N. Y.
Illinois Zinc Co., Chicago, Ill.
Kirk & Son, Morris, P., Los Angeles, Calif.
National Lead Co., New York, N. Y.
Northwest Lead Co., Seattle, Wash.
Standard Rolling Mills, Inc., Brooklyn, N. Y.
Weirton Steel Co., Weirton, W. Va. (Alloy coated)

Special Metal

American Brass Co., Waterbury, Conn. (Copper-silicon alloys)
American Nickeloid Co., Peru, Ill. (Nickel, chromium, brass & copper plated zinc)
American Silver Co., Inc., Flushing, N. Y.
Apollo Metal Works Chicago, Ill. (Plated—Nickel Zinc, Nickel Copper, Chrome Copper, Chrome Steel, Nickel Steel, Chrome Brass)
Bethlehem Steel Co., Bethlehem, Pa. (Nickel—Chromium)
Cheney Flashing Co., Trenton, N. J. (Copper-zinc alloy)
Division Lead Co., Chicago, Ill. (Non-ferrous)
Dow Chemical Co., Midland, Mich. (Magnesium)
Handy & Harman, New York, N. Y. (Silver, gold-silver alloys)
Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
International Nickel Co., Inc., New York, N. Y. (Nickel & nickel alloys)
Lukens Steel Co., Coatesville, Pa. (Monel & Inconel)
Maysteel Products, Inc., Milwaukee, Wis.

National Sheet Metal Co., Peru, Ill. (Electro-Plated)
Revere Copper & Brass Inc., New York, N. Y. (Copper alloys)
Rigidized Metals Corp., Buffalo, N. Y. (Titanium)
Robertson Co., H. H., Pittsburgh, Pa. (Protected)
Western Brass Mills, Metals Div. Olin Industries, Inc., East Alton, Ill. (Brass, bronze, phosphor bronze)

Steel, Aluminum Coated

Armco Steel Corp., Middletown, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.

Steel, Black

Bethlehem Steel Co., Bethlehem, Pa.
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
Continental Steel Corp., Kokomo, Ind.
Follansbee Steel Corp., Pittsburgh, Pa.
Inland Steel Products Co., Milwaukee, Wis.
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Newport Steel Corp., Newport, Ky.
Niles Rolling Mill Co., Niles, Ohio.
Reeves Steel & Mfg. Co., Dover, Ohio.
Republic Steel Corp., Cleveland, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.
Roofing & Supply Co., Chattanooga, Tenn.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
U.S. Steel Co., Pittsburgh, Pa.
Wheeling Steel Corp., Wheeling, W. Va.
Wood Steel Co., Alan, Conshohocken, Pa.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel, Blue, Polished

Follansbee Steel Corp., Pittsburgh, Pa.
Granite City Steel Co., Granite City, Ill.
Inland Steel Products Co., Milwaukee, Wis.
Reeves Steel & Mfg. Co., Dover, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.

Steel, Copper Bearing, Galvinized

Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
Continental Steel Corp., Kokomo, Ind.
Follansbee Steel Corp., Pittsburgh, Pa.
Granite City Steel Co., Granite City, Ill.
Inland Steel Co., Chicago, Ill. (Copper alloy & zinc alloy)
International Steel Co., Evansville, Ind.
Newport Steel Corp., Newport, Ky.
Niles Rolling Mill Co., Niles, Ohio.
Reeves Steel & Mfg. Co., Dover, Ohio.
Repubic Steel Corp., Cleveland, Ohio.
Roofing & Supply Co., Chattanooga, Tenn.
Sharon Steel Co., Sharon, Pa.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa.
Weirton Steel Co., Weirton, W. Va.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel, Corrugated

Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio. (Galv.)
Bethlehem Steel Co., Bethlehem, Pa. (Galv.)
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif. (Galv.)
Inland Steel Products Co., Milwaukee, Wis.
International Steel Co., Evansville, Ind.
Jones & Laughlin Steel Corp., Pittsburgh, Pa. (Black)
New Delphos Mfg. Co., Delphos, Ohio. (Galv.)
Newport Steel Corp., Newport, Ky. (Galv. & black)
Niles Rolling Mill Co., Niles, Ohio.
Reeves Steel & Mfg. Co., Dover, Ohio. (Galv. & black)
Republic Steel Corp., Cleveland, Ohio. (Galv.)
Roofing & Supply Co., Chattanooga, Tenn.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa. (Galv. & black)
Weirton Steel Co., Weirton, W. Va. (Galv.)
Wheeling Corrugating Co., Wheeling, W. Va.

Steel, Galvanized

Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
Continental Steel Corp., Kokomo, Ind.
Inland Steel Co., Chicago, Ill.
International Steel Co., Evansville, Ind.
New Delphos Mfg. Co., Delphos, Ohio.
Newport Steel Corp., Newport, Ky.
Niles Rolling Mill Co., Niles, Ohio.
Ralph Mfg. Co., Inc., Wadsworth, Ohio.
Reeves Steel & Mfg. Co., Dover, Ohio.
Republic Steel Corp., Cleveland, Ohio.
Roofing & Supply Co., Chattanooga, Tenn.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa.
Weirton Steel Co., Weirton, W. Va.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.

Steel, Galvannealed

Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
Continental Steel Corp., Kokomo, Ind.
Newport Steel Corp., Newport, Ky.
Niles Rolling Mill Co., Niles, Ohio.
Republic Steel Corp., Cleveland, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.
Sharon Steel Corp., Sharon, Pa.
United States Steel Co., Pittsburgh, Pa.

Steel, Protective Coated

American Steel Band Co., Pittsburgh, Pa.
Apollo Metal Works, Chicago, Ill.
Baltimore Porcelain Steel Corp., Baltimore, Md. (Porcelain)
Coated Coil Corp., New York, N. Y.
Mid-America Steel Warehouses, Chicago, Ill.
Plasteel Products Corp., Washington, Pa.
Wheeling Corrugating Co., Wheeling, W. Va.

Steel, Stainless

Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
Apollo Metal Works, Chicago, Ill.
Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Crucible Steel Co. of America, New York, N. Y.
Eastern Stainless Steel Corp., Baltimore, Md.
Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
International Steel Co., Evansville, Ind.
Jessop Steel Co., Washington, Pa.
Republic Steel Corp., Cleveland, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.
Sharon Steel Corp., Sharon, Pa.
Superior Steel Corp., Pittsburgh, Pa.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa.
Universal-Cyclops Steel Corp., Bridgeville, Pa.
Washington Steel Corp., Washington, Pa.

Steel, Terne Plate

Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Follansbee Steel Corp., Pittsburgh, Pa.
Newport Steel Corp., Newport, Ky.
Niles Rolling Mill Co., Niles, Ohio.
Republic Steel Corp., Cleveland, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.
Roofing & Supply Co., Chattanooga, Tenn.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa.
Weirton Steel Co., Weirton, W. Va.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel, Tin Plate

Berger Mfg. Div., Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Granite City Steel Co., Granite City, Ill.
Inland Steel Co., Chicago, Ill.
Jones & Laughlin Steel Corp, Pittsburgh, Pa.
Republic Steel Corp., Cleveland, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.
Sharon Steel Corp., Sharon, Pa.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa.
Weirton Steel Co., Weirton, W. Va.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

Zinc

American Nickeloid Co., Peru, Ill.

Apollo Metal Works, Chicago, Ill.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Empire Metal Co., Syracuse, N. Y.
Hegeler Zinc Co., Danville, Ill.
Illinois Zinc Co., Chicago, Ill.
Matthiessen & Hegeler Zinc Co., La Salle, Ill.
New Jersey Zinc Co., New York, N. Y.
Potts-Farrington Co., Philadelphia, Pa.
Rigidized Metals Corp., Buffalo, N. Y.

SHEETS, NON-METALLIC

Acme Asbestos Covering & Flooring Co., Chicago, Ill. (Asbestos cement).
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Asbestos cement)
Celotex Corp., Chicago, Ill.
Continental-Diamond Fibre Co., Newark, Del.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (Plastics & coated fabrics)
Johns-Manville, New York, N. Y. (Asbestos cement)
Keasbey & Mattison Co., Ambler, Pa. (Asbestos)
Keystone Asphalt Products Co., Chicago, Ill.
Masonite Corp., Chicago, Ill. (Wood fiber)
Meadows, Inc., W. R., Elgin, Ill.
Norristown Magnesia & Asbestos Co., Norristown, Pa. (Asbestos)
Panelyte Div., St. Regis Paper Co., New York, N. Y. (Plastic)
Rohm & Haas Co., Philadelphia, Pa. (Plastic)
Ruberoid Co., New York, N. Y. (Asbestos cement; flat & corrugated)
Sall Mountain Co., Hamilton, Ohio.
Wilson, Inc., Grant, Chicago, Ill. (Asbestos)

SHIELDS, WARM AIR REGISTER

Gammeter Co., W. F., Cadiz, Ohio. (With Humidifier)
Savage Co. W. J., Knoxville, Tenn.

SHINGLES AND TILE, METAL

Berger Mfg. Div., Republic Steel Corp., Canton, Ohio. (Galv.)
Edwards Mfg. Co., Inc., Cincinnati, Ohio. (Galv. steel, tin, zinc, aluminum & copper)
Fingles Co., Baltimore, Md. (All metals)
Matthiessen & Hegeler Zinc Co., La Salle, Ill. (Zinc)
Miller & Doing, Brooklyn, N. Y.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Southern States Iron Roofing Co., Savannah, Ga. (Steel & aluminum)
Wheeling Corrugating Co., Wheeling, W. Va., (Steel shingles)
Wallace Co., William, Metalbestos Div., Belmont, Calif. (Painted tin and galv.)

SHUTTERS

See Louvers and Shutters

SKYLIGHT LIFTS

See Lifts, Skylight

SKYLIGHTS

Acme Mfg. Co., Philadelphia, Pa.
American Steel Band Co., Pittsburgh, Pa.
Biersach & Niedermeyer Co., Milwaukee, Wis.
Danzer Metal Works Co., Hagerstown, Md.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Fingles Co., Baltimore, Md.
Gehri Co., Tacoma, Wash.
General Sheet Metal Works, Inc., Bridgeport, Conn. (Puttyless)
Hirschman-Pohle Co., Inc., LeRoy, N. Y. (Puttyless)
LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
Lee & Son Co., Thomas, Cincinnati, Ohio.
Moeschl-Edwards Corrugating Co., Inc., Cincinnati, Ohio.
Overly Mfg. Co., Greensburg, Pa.
Pennsylvania Wire Glass Co., Philadelphia, Pa.
Perkinson, William J., Chicago, Ill.
Riester & Thesmacher Co., Cleveland, Ohio.
Riggin Metal Products, Kankakee, Ill.
Robertson Co., H. H., Pittsburgh, Pa. (Structura!)
St. Paul Corrugating Co., St. Paul, Minn.
Schoedinger, F. O., Columbus, Ohio.
Sioux Steel Co., Sioux Falls, S. D.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Souther Iron Co., E. E., St. Louis, Mo.
Tiffin Art Metal Co., Tiffin, Ohio.
Vallas, Lionel, Chicago, Ill.
Van Noorden Co., E., Boston, Mass.
Vent-O-Lite Co., Chicago, Ill. (Puttyless)
Willis Steel Corp., Galesburg, Ill.
York Corrugating Co., York, Pa.

SLITTING MACHINES

See Machines, Slitting

SMOKE PIPE

See Pipe, Smoke

SNIPS AND SHEARS, BENCH AND HAND

Bartlett Mfg. Co., Detroit, Mich.
Berridge Shear Co., Sturgis, Mich. (Hand)
Beverly Shear Mfg. Co., Chicago, Ill.
Bremil Mfg. Co., Erie, Pa. (Shears)
Compton Shear Co., W. H., Newark, N. J.
Crescent Tool Co., Jamestown, N. Y.
Henkel-Clauss Co., Fremont, Ohio. (Hand)
Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
Klenk's Aviation Snips, Wilmington, Del.
Lincoln Machine Co., Boston, Mass.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Penn Tool Co., Philadelphia, Pa.
Roto-Table Co., Dayton, Ohio. (Double cutting, notching, nibbling & dovetailing)
Snap-On Tools Corp., Kenosha, Wis.
Viking Shear Co., Erie, Pa. (Shears)
Whitney Mfg. Co., W. A., Rockford, Ill.
Wiss & Sons Co., J., Newark, N. J.

SNOW GUARDS

See Guards, Snow

SOLDER

Allen Co., Inc., L. B., Chicago, Ill. (Acid & rosin core, bar, wire, powder, aluminum, silver, stainless steel)
All-State Welding Alloys Co., Inc., White Plains, N. Y.
Alpha Metals, Inc., Jersey City, N. J. (Silver & tin-lead)
American Products Corp., Chicago, Ill. (Silver)
American Solder & Flux Co., Philadelphia, Pa. (paste)
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chemalloy Associates, Santee, Calif. (Alum. & zinc)
Chicago Smelting & Refining Corp., Chicago, Ill.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Division Lead Co., Chicago, Ill.
Downs-Smith Brass & Copper Co., New York, N. Y.
Eagle-Picher Co., Cincinnati, Ohio. (Bar & Wire)
Empire Metal Co., Syracuse, N. Y.
Farrelloy Co., Philadelphia, Pa.
Federated Metals Div. American Smelting & Refining Co., New York, N. Y.
Flemm Lead Co., Inc., Long Island City, N. Y.
Fusion Engineering, Cleveland, Ohio.
General Plate Div., Metals & Controls Corp., Attleboro, Mass. (Silver & gold)
Glaser Lead Co., Inc., Brooklyn, N. Y.
Handy & Harman, New York, N. Y. (Silver)
Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
Kester Solder Co., Chicago, Ill. (Bar, cored, self-fluxing wire)
Kirk & Son, Morris P., Los Angeles, Calif.
Klauer Mfg. Co., Dubuque, Iowa.
Lenk Mfg. Co., Boston, Mass. (Rosin core, acid core, aluminum wire)
Lukens Metal Co., Thos. F., Philadelphia, Pa.
Marquette Mfg. Co., Inc., Minneapolis, Minn. (Aluminum, silver)
Mueller Brass Co., Port Huron, Mich.
National Lead Co., New York, N. Y.
Northwest Lead Co., Seattle, Wash.
Ohmer Co., Geo. H., Dayton, Ohio.
Okun Co., A. L., Flushing, N. Y.
Ruby Chemical Co., Columbus, Ohio. (Acid & rosin core)
Sherman & Co., Flushing, N. Y. (Silver)
Standard Rolling Mills, Inc., Brooklyn, N. Y.
Technical Processes Division, Colonial Alloys Co., Philadelphia, Pa. (Aluminum)
Tinit Mfg. Co., Inc., Denver, Colo.
United Wire & Supply Corp., Providence, R. I.

SOLDERING COPPERS

See Coppers, Soldering

SOLDERING FLUX

See Flux, Soldering

SOLDERING FURNACES

See Furnaces, Soldering

SOLDERING TORCHES

See Torches, Soldering

SOLENOID VALVES

See Valves, Solenoid

SOOT REMOVER

Ampion Corp., Long Island City, N. Y.
Coughlan Co., G. N., West Orange, N. J.
General Filters, Inc., Detroit, Mich.
Healy-Ruff Co., St Paul, Minn.
Hercules Chemical Co., Inc., New York, N. Y.
Magnus Chemical Co., Garwood, N. J.
Marine Electrolysis Eliminator Co., Seattle, Wash.
Metropolitan Refining Co., Inc., Long Island City, N. Y.
Miller Products Co., Lansing, Mich.
North American Mogul Products Co., Cleveland, Ohio.
Red Wing Oil Burner Co., Inc., Medford, Mass.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Tamms Industries Inc., Chicago, Ill.

SPOT WELDERS

See Welders, Spot

SPRAY GUNS

See Guns, Spray

STAINLESS STEEL SHEETS

See Sheets, Metal, Steel, Stainless

STAMPINGS, METAL

Ackermann Mfg. Co., Wheeling, W. Va.
Acme Mfg. Co., Philadelphia, Pa.
Aluminum Co. of America, Pittsburgh, Pa.
Ames Co., W. R., San Francisco, Calif.
Baum Heating, Inc., J. H., Youngstown, Ohio.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bossert Co., Inc., Utica, N. Y.
Burgess-Norton Mfg. Co., Geneva, Ill.
Campbell Stainless Products Co., Washington, Pa. (Stainless steel letters)
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago Metal Mfg. Co., Chicago, Ill. (Rings)
Commercial Shearing & Stamping Co., Youngstown, Ohio.
Dahlstrom Metallic Door Co., Jamestown, N. Y.
Dayton Rogers Mfg. Co., Minneapolis, Minn.
Detroit Stamping Co., Detroit, Mich.
Division Lead Co., Chicago, Ill.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Friedley-Voshardt Co., Chicago, Ill.
Globe Machine & Stamping Co., Cleveland, Ohio.
H P L Mfg. Co., Cleveland, Ohio.
Hupp Corp., Globe Stamping Div., Cleveland, Ohio.
Ideal Products Co., Oshkosh, Wis.
Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Ledcote Products Co., Long Island City, N. Y.
Lukens Steel Co., Coatesville, Pa.
Maysteel Products, Inc., Milwaukee, Wis.
Mechanical Products Co., Seattle, Wash.
Miller & Doing, Brooklyn, N. Y.
Morrison Products Inc., Cleveland, Ohio.
Morrison Steel Products, Inc., Buffalo, N. Y.
Moss Industries, Inc., Brooklyn, N. Y.
National Metal Fabricators, Chicago, Ill.
New Delphos Mfg. Co., Delphos, Ohio.
New Monarch Machine & Stamping Co., Des Moines, Iowa.
Northwest Metal Products, Inc., Seattle, Wash.
Paine Co., Addison, Ill.
Revere Copper & Brass Inc., New York, N. Y. (Copper & copper alloy)
Small Lot Stamping Co., Linden, N. J.
Standard Stamping & Perforating Co., Chicago, Ill.
Steinen Mfg. Co., Wm., Newark, N. J.
Tannewitz Works, Grand Rapids, Mich.
United States Register Co., Battle Creek, Mich.
Western Brass Mills, Metals Div. Olin Industries, Inc., East Alton, Ill.
Wheeling Corrugating Co., Wheeling, W. Va.
Worcester Pressed Steel Co., Worcester, Mass.
York Corrugating Co., York, Pa.
Youngstown Sheet & Tube Co., Youngstown, Ohio.
Ziegler-Harris Co., Burbank, Calif.

STAMPINGS, STEEL FURNACE

Ackermann Mfg. Co., Wheeling, W. Va.
Commercial Shearing & Stamping Co., Youngstown, Ohio. (Heads for furnace domes & crescent radiators)
Mohawk Metal Products Co., Frankfort, N. Y. (Furnace shells and radiators)

STEEL TUBING

See Tubing, Steel

STERILIZERS, AIR

See Lamps, Germicidal; Blower-Filter Units Equipped With Germicidal Apparatus

STOKER CONTROLS

See Controls; Control Systems

STOKERS

Domestic (Up to 61 lb per hour)

Allen Stoker Co., Allentown, Pa. (Anthracite)
American Furnace Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Auburn Burner Co., Auburn, Ind.
Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
Automatic Firing Corp., St. Louis, Mo.
Black Diamond Stoker Co., Sioux City, Iowa.
Canton Stoker Corp., Canton, Ohio.
Carpenter Heating & Stoker Co., Cleveland, Ohio.
Catskill Metal Works, Inc., Catskill, N. Y. (Anthracite)
Central Rubber & Steel Corp., Findlay, Ohio.
Cooper Stoker Co., Pittsfield, Mass. (Anthracite)
Cotta Transmission Co., Rockford, Ill.
Crane Co., Chicago, Ill.
Des Moines Furnace & Stove Repair Co., Des Moines, Iowa.
Diamond Iron Works, Inc., Minneapolis, Minn.
Eddy Stoker Corp., Chicago, Ill.
Electric Furnace-Man, Inc., Emmaus, Pa.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Frederick Iron & Steel, Inc., Frederick, Md.
Freed Heater & Stoker Co., Topton, Pa. (Anthracite)
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Fuel Savers, Inc., Harrisburg, Pa.
Gehl Bros. Mfg. Co., West Bend, Wis.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Heating Assurance, Inc., Spokane, Wash.
Hemp & Co., Inc., Macomb, Ill.
Hershey Machine & Foundry Co., Manheim, Pa.
Illinois Iron & Bolt Co., Chicago, Ill.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Keith Furnace Co., Des Moines, Iowa.
Kingston Products Corp., Tipton, Ind.
Kol-Master Corp., Oregon, Ill.
Leas Co., H. Leslie, Monona, Iowa.
Meyer Furnace Co., Peoria, Ill.
Muncie Gear Works, Inc., Muncie, Ind.
National Steam Pump Co., Upper Sandusky, Ohio.
National Stoker Co., Inc., St. Louis, Mo. (Bituminous)
Nelson Bros. & Strom Co., Racine, Wis. (Bituminous)
Northern Steel & Stoker Corp., Peoria, Ill.
Plymouth Industries, Inc., Plymouth, Ind.
Premium Coal & Oil Co., Cincinnati, Ohio.
Quick Furnace & Supply Co., Des Moines, Iowa.
Schwab Furnace Co., Milwaukee, Wis.
Schwab Safe Co., Lafayette, Ind.
Souther Iron Co., E. E., St. Louis, Mo.
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Stoker-Lad Co., Tacoma, Wash.
Stoker-Ola Mfg. Co., Peoria, Ill.
Stokol Stoker Co., Inc., Dayton, Ohio.
Sun-Fire Stoker Corp., New Albany, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tropic-Air Stoker Co., Canton, Ohio.
U. S. Machine Corp., Lebanon, Ind.
Whiting Fire Power Products Corp., Superior, Wis.
Will-Burt Co., Orrville, Ohio.
Worsham Co., Inc., Long Beach, Calif.

Industrial and Commercial (61 lb to 300 lb per hour)

American Coal Burner Co., Chicago, Ill.
American Engineering Co., Philadelphia, Pa.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.

Auburn Burner Co., Auburn, Ind.
Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
Automatic Firing Corp., St. Louis, Mo.
Black Diamond Stoker Co., Sioux City, Iowa.
Bros Boiler & Mfg. Co., Wm., Minneapolis, Minn.
Canton Stoker Corp., Canton, Ohio.
Carpenter Heating & Stoker Co., Cleveland, Ohio.
Catskill Metal Works, Inc., Catskill, N. Y. (Anthracite).
Central Rubber & Steel Corp., Findlay, Ohio.
Chicago Automatic Stoker Co., Inc., Chicago, Ill.
Cooper Stoker Co., Pittsfield, Mass. (Anthracite)
Cotta Transmission Co., Rockford, Ill.
Detroit Stoker Co., Detroit, Mich.
Diamond Castings Co., Johnsonburg, Pa.
Diamond Iron Works, Inc., Minneapolis, Minn.
Eddy Stoker Corp., Chicago, Ill.
Electric Furnace-Man, Inc., Emmaus, Pa.
Flynn & Emrich Co., Baltimore, Md.
Frederick Iron & Steel, Inc., Frederick, Md.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Fuel Savers, Inc., Harrisburg, Pa.
Gehl Bros. Mfg. Co., West Bend, Wis.
General Machinery Co., Spokane, Wash.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Heating Assurance Inc., Spokane, Wash.
Hershey Machine & Foundry Co., Manheim, Pa.
Illinois Iron & Bolt Co., Chicago, Ill.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Kingston Products Corp., Tipton, Ind.
Kol-Master Corp., Oregon, Ill.
Leas Co., H. Leslie, Monona, Iowa.
Meyer Furnace Co., Peoria, Ill.
Muncie Gear Works, Inc., Muncie, Ind.
National Steam Pump Co., Upper Sandusky, Ohio.
National Stoker Co., Inc., St. Louis, Mo. (Bit).
Nelson Bros. & Strom Co., Racine, Wis. (Bit).
Northern Steel & Stoker Corp., Peoria, Ill.
Omaha Stove Repair Works, Inc., Omaha, Nebr.
Ormsby-Osterman Co., St. Louis, Mo.
Plymouth Industries, Inc., Plymouth, Ind.
Premium Coal & Oil Co., Cincinnati, Ohio.
Rosedale Foundry & Machinery Co., Pittsburgh, Pa.
Schwab Furnace Co., Milwaukee, Wis.
Schwab Safe Co., Lafayette, Ind.
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Stoker-Ola Mfg. Co., Peoria, Ill.
Stokol Stoker Co., Inc., Dayton, Ohio.
Sun-Fire Stoker Corp., New Albany, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tropic-Air Stoker Co., Canton, Ohio.
U. S. Machine Corp., Lebanon, Ind.
Westinghouse Electric Corp., Pittsburgh, Pa.
Whiting Fire Power Products Corp., Superior, Wis.
Whitty Co., Inc., Boston, Mass. (Bituminous)
Will-Burt Co., Orrville, Ohio.
Woolley Engineering Co., Detroit, Mich.

STOVES

See Heaters

SWITCHES, MAGNETIC, MANUAL, TIME

See Controls

SYSTEMS, HEATING, SMALL PIPE

(Consisting of furnace, plenum chamber, takeoff fittings, boots, elbows, small pipe)

Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bryant Htg. Div., Affil. Gas Equipment, Inc., Cleveland, Ohio.
Coleman Co., Inc., Wichita, Kans.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
J & J Sheet Metal Co., Van Dyke, Mich.
Jettronaire, Inc., McKeesport, Pa.
Lennox Furnace Co., Marshalltown, Iowa.
Majestic Co., Inc., Huntington, Ind.
Meyer Furnace Co., Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Surface Combustion Corp., Toledo, Ohio.
Williamson Heater Co., Cincinnati, O.

TANKS, STORAGE, FUEL OIL

Black, Sivalls & Bryson, Inc., Kansas City, Mo.
Brenner & Co., Inc., Jacob, Fond du Lac, Wis.
Kaustine Co., Inc., Perry, N.Y.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Rheem Mfg. Co., New York, N. Y.
Whitlock Mfg. Co., Hartford, Conn.

TANK GAUGES, FUEL OIL

See Gauges, Tank, Fuel Oil

TEES

See Angles, Bars, Beams, Channels, and Tees

TEMPERATURE CONTROLS

See Controls; Control Systems

TEMPERATURE RECORDERS

See Recorders, Temperature

THERMOMETERS, INDICATING

Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Bailey Meter Co., Cleveland, Ohio.
Bristol Co., Waterbury, Conn.
Defender Instrument & Regulator Co., St. Louis, Mo.
Fee & Stemwedel, Inc., Chicago, Ill.
Foxboro Co., Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
G. M. Mfg. Co., New York, N. Y.
H-B Instrument Co., Philadelphia, Pa.
Hill & Co., E. Vernon, Chicago, Ill. (Also Kata Thermometers)
Illinois Testing Laboratories, Inc., Chicago, Ill.
Leeds & Northrup Co., Philadelphia, Pa.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
Marsh Corp., Jas. P., Skokie, Ill.
Marshalltown Mfg. Co., Marshalltown, Iowa.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Moeller Instrument Co., Richmond Hill, N. Y.
Pacific Transducer Co., Div. Clarkstan Corp., Los Angeles, Calif.
Palmer Thermomters, Inc., Cincinnati, Ohio.
Philadelphia Thermometer Co., Philadelphia, Pa.
Powers Regulator Co., Skokie, Ill. (Dials)
Precision Thermometer & Instrument Co., Philadelphia, Pa.
Preferred Utilities Mfg. Corp., New York, N. Y.
Rochester Mfg. Co., Inc., Rochester, N. Y. (Dials)
Taylor Instrument Companies, Rochester, N. Y.
United States Gauge Div., American Machine & Metals Inc., New York, N. Y.
Weksler Thermometer Corp., New York, N. Y.
Weston Electrical Instrument Corp., Newark, N. J.
Wheelco Instruments Div., Barber-Coleman Co., Rockford, Ill.

THERMOSTATS

See Controls

THROUGH WALL FLASHINGS

See Flashings, Through Wall

TIME SWITCHES

See Controls

TIMERS, WELDING

Automatic Electric Mfg. Co., Mankato, Minn.
Automatic Temperature Control Co., Inc., Philadelphia, Pa.
Eisler Engineering Co., Newark, N. J.
Electronic Products Co., St. Charles, Ill.
Peer, Inc., Benton Harbor, Mich.
Photoswitch, Inc., Cambridge, Mass.
Sciaky Bros., Inc., Chicago, Ill.
Westinghouse Electric Corp., Pittsburgh, Pa.

TINNING

See Baths, Tinning

TIPS, DAMPER

See Clips and Tips, Damper

TOOLS, ROOFERS'

Adams Co., Dubuque, Iowa. (Scaffold brackets)
Aeroil Products Co., Inc., South Hackensack, N. J. (Melting kettles, hoists, buckets & accessories)
Ajax Building Bracket Co., Cleveland, Ohio. (Brackets)
Belden Machine Co., New Haven, Conn. (Slater hammers, rippers & stakes)
Connery Construction Co., Philadelphia, Pa. (Kettles)
Efsco Products Co., Syracuse, N. Y. (Roof scrapers)
Frey & Co., Frank P., Chicago, Ill. (All kinds)
Hauck Mfg. Co., Brooklyn, N. Y. (Kettles)
Littleford Bros., Inc., Cincinnati, Ohio. (Roofing kettles)

Matt Coil-Less Burner Co., Chicago, Ill. (Buckets, mops, kettles, etc.)
Melaway Corp., Brandon, Wis.
Mohawk Metal Products Co., Frankfort, N. Y. (Kettles)
Moser & Son Mfg. Co., Bluffton, Ind. (Ladder jacks)
Newark Ladder & Bracket Co., Inc., Clark (Rahway), N. J. (Roof brackets & accessories)
Niagara Machine & Tool Works, Buffalo, N. Y. (Double seamers)
Owens-Corning Fiberglas Corp., Toledo, Ohio. (Fiberglas mop yarn)
Peck, Stow & Wilcox Co., Southington, Conn. (Seamers, tongs, etc.)
Polis Mfg. Co., J. D., Chicago, Ill. (Furnaces)
Rose Mfg. Co., Denver, Colo. (Ladder shoes)
Southbridge Roofing Co., Inc., Southbridge, Mass. (Scrapers, spreaders, fire pots, buckets)
Sperry & Co., D. R., Batavia, Ill. (Kettles
Stortz & Son, Inc., John, Philadelphia, Pa. (Tongs, seamers, scrapers, jointers, punches, hammers, rippers, stakes)
Structural Slate Co., Pen Argyl, Pa. (Hammers, rippers, stakes, cutters, punches)
Wodack Electric Tool Corp., Chicago, Ill. (Saws)

TOOLS, SHEET METAL WORKERS'

Air-Speed Tool Co., Los Angeles, Calif. (Pneumatic file & saw)
Allen, H. D., Los Angeles, Calif., (Template transfer punches)
Atkins Saw Div., Borg-Warner Corp., Indianapolis, Ind. (Band saw & hack saw blades)
Atlas Welding Accessories Co., Ferndale, Mich.
Balmar Corp., Baltimore, Md.
Barth Mfg. Co., Milldale, Conn. (Hand rivet sets, groovers, punches, awls.)
Beall Pipe & Tank Corp., Portland, Ore. (Carrier for Sheets)
Black & Decker Mfg. Co., Towson, Md. (Automatic screw driver, portable electric tapper)
Chicago Pneumatic Tool Co., New York, N. Y. (Rivet)
Clark Co., Robert H., Beverly Hills, Calif. (Adjustable hole cutters & circle cutters)
Clark-Hopkins Equipment Corp., Philadelphia, Pa.
Clemson Bros., Inc., Middletown, N. Y. (Hack Saws)
Crandall Mfg. Co., Los Angeles, Calif. (Drill Grinders)
Crescent Tool Co., Jamestown, N. Y. (Scratch awls, pliers, screw drivers, wrenches)
Damascus Steel Products Corp., Rockford, Ill. (Punches, chisels, star drills, nippers, etc.)
Davis & Son Machine Works, Los Angeles, Calif. (Clip & button punch)
Delta Mfg. Div., Rockwell Mfg. Co., Milwaukee, Wis.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y. (Hammers)
Excelsior Tool and Machine Co., East St. Louis, Ill. (Sheet clamps)
Fairmount Tool & Forging Co., Cleveland, Ohio. (Calking irons, File holders, pliers, solder paddle, chisels, punches, hammers)
Fox Noiseless Hammer Co., Media, Pa. (Seaming hammer)
Frayn Co., N. J., Redwood City, Calif. (Hole cutters)
General Electric Co., Carboloy Dept., Detroit, Mich. (Concrete drills)
Gouran, Mark F., Philadelphia, Pa. (Welding fixtures)
Haines Gauge Co., Inc., Philadelphia, Pa. (Thickness gauges)
Handees Co., Bloomington, Ill. (Truck)
Hanlan Co., Los Angeles, Calif. (Elec. appliance tester)
Hexdall, A. M., Morris, Ill. (Seam openers & hammers)
Hub Specialty Co., Reading, Mass. (Awl).
Interstate Drop Forge Co., Milwaukee, Wis.
Interstate Sales Co., New York, N. Y. (Angle meters & center finders)
Johnson, Inc., Wm., Newark, N. J. (Rivet sets)
Johnson Ladder Shoe Co., Eau Claire, Wis. (Ladder shoes all rubber and vise jaws)
Kennametal Inc., Latrobe, Pa. (Masonry & rock drill bits)
Lander & Abbott, La Crescenta, Calif.
Lane Shur-Grip Tool Co., Chicago, Ill.
Lapeer Mfg. Co., Detroit, Mich. (Vise wrench)
Lufkin Rule Co., Saginaw, Mich. (Rules: tapes, flexible, circumference, etc.; center punches, scribers, etc.)
Lyon Metal Products, Inc., Aurora, Ill. (Stock cart, tool stand, tool boxes & work benches)
Machine Rebuilding Co., Detroit, Mich.
Magnetool Div., Multifinish Mfg. Co., Detroit, Mich. (Magnetic lifter)
Maplewood Machinery Co., Chicago, Ill. (Trammels, marking tools)
Mehl Machinery, Houston, Texas. (Screw clamps)
Melaway Corp., Brandon, Wis.
Merchandising & Mfg. Associates, Inc., Lancaster, Pa. (Rivet cutters & jogging blocks)
Millers Falls Co., Greenfield, Mass. (Hack saw blades)
Misener Mfg. Co., Inc., Syracuse, N. Y. (Hole saws)
Moser & Son Mfg. Co., Buffton, Ind. (Spouting tripods)
Munton Mfg. Co., Franklin Park, Ill. (Hydraulic vises)
Mutual Liquid Gas & Equipment Co., Inglewood, Calif. (Blow torch)
Newark Ladder & Bracket Co., Inc., Clark (Rahway), N. J. (Ladders, scaffolds & accessories)
New England Carbide Tool Co., Cambridge, Mass. (Masonry drill bits)
Niagara Machine & Tool Works, Buffalo, N. Y. (Stakes, hammers, groovers, hollow punches, etc.)
Owens Co., H., Culver City, Calif. (Pattern developer)
Packham Crimper Co., Mechanicsburg, Ohio. (Crimping tongs)
Peck, Stow & Wilcox Co., Southington, Conn. (Hammers, awls, rivet sets, groovers, etc.)
Penn Tool Co., Philadelphia, Pa. (Punches, chisels & edge tools)
Petersen Mfg. Co., Inc., DeWitt, Nebr. (Clamps)
Phillips Drill Co., Chicago, Ill. (Anchor bolt drills)
Pioneer Tool Co., Racine, Wis. (Pipe crimpers, gutter clamps, adjustable saw handles, scratch awls)
Rapidesign, Inc., Glendale, Calif. (Templates)
Rawlplug Co., Inc., New York, N. Y. (Masonry drills)
RCS Tool Sales Corp., Joliet, Ill. (Power portable saw attachment)
Reiner & Campbell Co., Inc., Newark, N. J. (Dividers & notchers)
Ripper, Yakima, Wash. (Drill guide for perforating)
Roesch Tool Products, Los Angeles, Calif (Crimper, clamps)
Rotary Concrete Drill Co., Pasadena, Calif. (Drill bits)
Roto-Table Co., Dayton, Ohio. (Power table for turning machines)
Scheck, William, Ridgefield, N. J. (Punches & Scribers)
Schild Mfg. Co., Dallas, Texas. (Cutters)
Skil Corporation, Chicago, Ill. (Portable power tools)
Sheridan-Gray, Inc., Palos Verdes Estates, Calif.
Smith & Son, Inc., Seymour, Oakville, Conn. (Clamp pliers)
Snap-On Tools Corp., Kenosha, Wis. (Wrenches, hammers, rules, etc.)
Stanley Tools, New Britain, Conn. (Punches, rules, cold chisels, levels, bit braces, squares, screw drivers, bars, hammers)
Stortz & Son, Inc., John, Philadelphia, Pa. (Hammer, punches, chisels, rivet sets)
Termite Drills, Inc., Pasadena, Calif. (Concrete drill bits)
Topflight Tool Co., Huber Bldg., York, Pa. (Jigs, riveters, dimplers, rivet removers, scribing discs)
Tri-Saw Corp., St. Louis, Mo. (Portable power saw)
Velocity-Power Tool Co., Pittsburgh, Pa. (Stud driver)
Vinco Products, Asbury Park, N. J. (Center punches)
Vital Products Mfg. Co., Cleveland, Ohio. (Caulking guns & cartridges)
Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., Danvers, Mass. (Electric solder pots)
Ward Machinery Co., Chicago, Ill. (Bender)
Whipple Sheet Metal Works, M. S. & L. H., Lansing, Mich. Clamps)
Whitney Mfg. Co., W. A., Rockford, Ill. (Tinner's hammers)
Whitney Metal Tool Co., Rockford, Ill. (Aircraft rivet squeezers, hand seamers, hammers, punches, rivet sets, awls)

TOPS, CHIMNEY

See Caps and Tops, Chimney

TORCHES, BRAZING, CUTTING, WELDING, OXY-ACETYLENE

Aeroil Products Co., Inc., South Hackensack, N. J.
Air Reduction Sales Co., New York, N. Y.
American Products Corp., Chicago, Ill. (Alcohol)
Bastian-Blessing Co., Chicago, Ill.
Bernz Co., Otto, Rochester, N. Y. (Brazing)
Borm Mfg. Co., Elgin, Ill.
Dockson Corp., Detroit, Mich.
Ergolyte Mfg. Co., Philadelphia, Pa. (Electric)
Eutectic Welding Alloys Corp., Flushing, N. Y.
General Scientific Equipment Co., Philadelphia, Pa.
Hamilton Tool Co., Hamilton, Ohio.
Harris Calorific Co., Cleveland, Ohio.
Imperial Brass Mfg. Co., Chicago, Ill.
Lee Co., K. O., Aberdeen, S. D. (Welding)
Linde Air Products Co., New York, N. Y.
Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Met Sales & Mfg. Co., Rockford, Ill.

Mid-States Welder Mfg. Co., Chicago, Ill. (Brazing & welding; ac & dc)
Minn-Kota Foundry & Mfg. Co., Fargo, N. D.
Modern Engineering Co., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
Reiner & Campbell Co., Inc., Newark, N. J.
Smith Welding Equipment Corp., Minneapolis, Minn.
Trindl Products, Ltd., Chicago, Ill.
Weldit, Inc., Detroit, Mich.

TORCHES, SOLDERING

Acet-A-Tips Co., Chicago, Ill.
Air Reduction Sales Co., New York, N. Y.
Bastian-Blessing Co., Chicago, Ill.
Bernz Co., Otto, Rochester, N. Y.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Diener Mfg. Co., Geo. W., Chicago, Ill.
Dockson Corp., Detroit, Mich.
Everhot Mfg. Co., Maywood, Ill.
Fusion Engineering, Cleveland, Ohio.
General Scientific Equipment Co., Philadelphia, Pa.
Goss Gas Inc., Glenshaw, Pa.
Harris Calorific Co., Cleveland, Ohio.
Ideal Industries, Inc., Sycamore, Ill.
Imperial Brass Mfg. Co., Chicago, Ill.
Insto-Gas Corp., Detroit, Mich.
Johnson Gas Appliance Co., Cedar Rapids, Iowa.
Lenk Mfg. Co., Boston, Mass.
Linde Air Products Co., New York, N. Y.
Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Met Sales & Mfg. Co., Rockford, Ill.
Minn-Kota Foundry & Mfg. Co., Fargo, N. D.
Modern Engineering Co., St. Louis, Mo.
Mutual Liquid Gas & Equipment Co., Inglewood, Calif.
National Cylinder Gas Co., Chicago, Ill.
Pressure Products Corp., Skokie, Ill.
Ransome Co., Emeryville, Calif.
Reiner & Campbell Co., Inc., Newark, N. J.
Sanders, J. A., Fulton, N. Y.
Sight Feed Generator Co., West Alexandria, Ohio.
Smith Welding Equipment Corp., Minneapolis, Minn.
Tinit Mfg. Co., Inc., Denver, Colo.
Torit Mfg., Co., St. Paul, Minn.
Turner Brass Works, Sycamore, Ill.
Unique Mfg. Co., Inc., Chicago, Ill. (Gasoline & Kerosene)
Velocity-Power Tool Co., Pittsburgh, Pa.
Weldit, Inc., Detroit, Mich.

TOWERS, COOLING, ATMOSPHERIC

Binks Mfg. Co., Chicago, Ill.
Fluor Corp., Ltd., The, Los Angeles, Calif.
Harry Cooling Towers, Inc., New York, N. J.
Lilie-Hoffman Cooling Towers, Inc., St. Louis, Mo.
New England Cooling Tower Co., Boston, Mass.
Pennsylvania Engineering Corp., New Castle, Pa.
Phillips Cooling Tower Co., Inc., Brooklyn, N .Y.
Pritchard & Co., J. F., Equipment Div., Kansas City, Mo.
Santa Fe Tank & Tower Co., Los Angeles, Calif.
Stewart Ice Machine Co., Pomona, Calif.
Tenney Engineering, Inc., Newark, N. J.
Thermal Industries, Indio, Calif.
United Cooling Tower Co., Kansas City, Mo.
Water Cooling Corp., New York, N. Y.
Water Cooling Tower Co., Chicago, Ill.
Wheeler Mfg. Co., C. H., Philadelphia, Pa.

TOWERS, COOLING, MECHANICAL DRAFT

Acme Equipment Co., of Oklahoma, Inc., Muskogee, Okla.
Acme Industries Inc., Jackson, Mich.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
Baltimore Aircoil Co., Inc., Baltimore, Md.
Beck Mfg. Co., New Albany, Ind.
Binks, Mfg. Co., Chicago, Ill.
Buensod-Stacey, Inc., New York, N. Y.
Bush Mfg. Co., West Hartford, Conn.
Crowell & Dunn, Inc., New York, N. Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Fluor Corp., Ltd., The, Los Angeles, Calif.
Foster Wheeler Corp., New York, N. Y.
Goodfellow Co., E. D., Memphis, Tenn.
Governair Corp., Oklahoma City, Okla.
Harry Cooling Towers, Inc., New York, N. Y.
Havens Structural Steel Co., Kansas City, Mo.
Kramer-Trenton Co., Trenton, N. J.
Lilie-Hoffman Cooling Towers, Inc., St. Louis, Mo.
McQuay, Inc., Minneapolis, Minn.
Marlo Coil Co., St. Louis, Mo.
New England Cooling Tower Co., Boston, Mass.
Pennsylvania Engineering Corp., New Castle, Pa.
Phillips Cooling Tower Co., Inc., Brooklyn, N .Y.
Pritchard & Co., J. F., Equipment Div., Kansas City, Mo.
Refrigeration Economics Co., Inc., Canton, Ohio.
Refrigeration Engineering, Inc., Los Angeles, Calif.
Santa Fe Tank & Tower Co., Los Angeles, Calif.
Thermal Industries, Indio, Calif.
United Conditioning Corp., Croton Falls, N. Y.
United Cooling Tower Co., Kansas City, Mo.
Vogt Machine Co., Henry, Louisville, Ky. (packaged unit with condenser, pump, etc.)
Water Cooling Corp., New York, N. Y.
Water Cooling Tower Co., Chicago, Ill.
Wheeler Mfg. Co., C. H., Philadelphia, Pa.
Worthington Corp., Harrison, N. J.

TRANSFORMERS, IGNITION

Acme Electric Corp., Cuba, N. Y.
Dongan Electric Mfg. Co., Detroit, Mich.
Dormeyer Industries, Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Harvey, Inc., Sid., Valley Stream, N. Y.
Jefferson Electric Co., Bellwood, Ill.
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.
Union Spring & Mfg. Co., Jersey City, N. J.
Webster Electric Co., Racine, Wis.

TRANSFORMERS, LOW VOLTAGE

Barber-Colman Co., Rockford, Ill.
Central Transformer Corp., Pine Bluff, Ark.
Crown Controls Co., Inc., New Bremen, Ohio.
Dongan Electric Mfg. Co., Detroit, Mich.
Dormeyer Industries, Chicago, Ill.
Eisler Engineering Co., Newark, N. J.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Jefferson Electric Co., Bellwood, Ill.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Taylor-Winfield Corp., Warren, Ohio.
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.
Union Spring & Mfg. Co., Jersey City, N. J.
Wagner Electric Corp., St. Louis, Mo.
Webster Electric Co., Racine, Wis.
Westinghouse Electric Corp., Pittsburgh, Pa.

TRANSMISSIONS, VARIABLE SPEED

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Dodge Mfg. Corp., Mishawaka, Ind.
Lewellen Mfg. Co., Columbus, Ind.
Link-Belt Co., Chicago, Ill.
Reliance Electric & Engineering Co., Cleveland, Ohio.
Stephens-Adamson Mfg. Co., Aurora, Ill.
Sterling Electric Motors, Inc., Los Angeles, Calif.
U. S. Electrical Motors, Inc., Los Angeles, Calif.
Wayne Mfg. Co., Pomona, Calif.

TRUCKS, MOTOR

Big Joe Mfg. Co., Chicago, Ill. (Lift)
Chevrolet Motor Div. General Motors Corp., Detroit, Mich.
Elwell-Parker Electric Co., Cleveland, Ohio. (Lift)
Ford Motor Co., Dearborn, Mich.
McCabe Powers Auto Body Co., St. Louis, Mo.
Marion Metal Products, Marion, Ohio. (Hydraulic)

TRIM, ORNAMENTAL

See Moulding and Trim, Ornamental

TUBING

Aluminum

Aluminum Co. of America, Pittsburgh, Pa.
Gray-Wilson Co., Detroit, Mich.
Harvey Machine Co., Inc., Torrence, Calif.
Lewin-Mathes, Lewis Metals Div., St. Louis, Mo.
Quaker State Metals Co., Mountville, Pa.
Revere Copper & Brass Inc., New York, N. Y.
Reynolds Metals Co., Louisville, Ky.
Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa.
United Wire & Supply Corp., Providence, R. I.
Wolverine Tube Div., Calumet & Hecla, Inc., Detroit, Mich.

Copper

American Brass Co., Waterbury, Conn.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Inc., Waterbury, Conn.

Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Gray-Wilson Co., Detroit, Mich.
Hussey & Co., C. G., Pittsburgh, Pa.
Kensico Tube Co., Mt. Kisco, N. Y.
Lewin-Mathes Co., Lewin Metals Div., St. Louis, Mo.
Mueller Brass Co., Port Huron, Mich.
Penn Brass & Copper Co., Erie, Pa.
Phelps Dodge Copper Products Corp., British American Tube Div., New York, N. Y.
Revere Copper & Brass Inc., New York, N. Y.
United Wire & Supply Corp., Providence, R. I.
Wolverine Tube Div., Calumet & Hecla, Inc., Detroit, Mich.

Nickel and Nickel Alloy

Bundy Tubing Co., Detroit, Mich.
International Nickel Co., Inc., New York, N. Y.
Revere Copper & Brass Inc., New York, N. Y.

Plastic

Acadia Synthetic Products Div., Western Felt Works, Chicago, Ill.
American Agile Corp., Bedford, O.
American Hard Rubber Co., New York, N. Y.
Carlon Products, Cleveland, Ohio.
Commercial Plastics Co., Chicago, Ill.
Continental-Diamond Fibre Co., Newark, Del.
General Ceramics & Steatite Corp., Keasbey, N. J.
General Electric Co., Chemical Div., Pittsfield, Mass.
Haveg Corp., Newark, Del.
Irvington Varnish and Insulator Co., Irvington, N. J.
Mills Corp., Elmer E., Chicago, Ill.
Pacific States Felt & Mfg. Co., Inc., San Francisco, Calif.
Panelyte Div., St. Regis Paper Co., New York, N. Y.
Sandee Mfg Co., Chicago, Ill.
Saran Lined Pipe Co., Ferndale, Mich.
Yardley Plastics Co., Columbus, O.

Steel

Armco Steel Corp., Middletown, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Bundy Tubing Co., Detroit, Mich.
Crucible Steel Co. of America, New York, N. Y.
Dieckmann Co., Ferdinand, Cincinnati, Ohio. (Galv. speaking tube)
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Laclede Steel Co., St. Louis, Mo.
Michigan Steel Tube Products Co., Detroit, Mich.
National Tube Co., Pittsburgh, Pa.
Republic Steel Corp., Cleveland, Ohio.
Revere Copper & Brass, Inc., New York, N. Y. (Welded)
Steel & Tubes Div., Republic Steel Corp., Cleveland, Ohio.
Timken Roller Bearing Co., Canton, Ohio.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel, Stainless

Allegheny-Ludlum Steel Corp., Pittsburgh, Pa.
Crucible Steel Co. of America, New York, N. Y.
Michigan Steel Tube Products Co., Detroit, Mich.
National Tube Co., Pittsburgh, Pa.
Republic Steel Corp., Cleveland, Ohio.
Steel & Tubes Div., Republic Steel Corp., Cleveland, Ohio.
Timken Roller Bearing Co., Canton, Ohio.

UNIT HEATERS

See Furnaces, Winter Air Conditioning, Suspended Type

VACUUM CLEANERS FOR FURNACES

See Cleaners, Vacuum, Furnace

VALVES, GAS PRESSURE REGULATING

Black, Sivalls & Bryson, Inc., Kansas City, Mo.
Davis Regulator Co., Chicago, Ill.
Defender Instrument & Regulator Co., St. Louis, Mo. (Chromometer)
Detroit Regulator Co., Detroit, Mich.
Dockson Corp., Detroit, Mich.
Eclipse Fuel Engineering Co., Rockford, Ill.
Fisher Governor Co., Marshalltown, Iowa.
Foster Engineering Co., Union, N. J.
Gas & Oil Industry Laboratories, Inc., Irvington, N. J.
General Controls Co., Glendale, Calif.
Harris Calorific Co., Cleveland, Ohio.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Reliance Regulator Div. American Meter Co., Inc., Alhambra, Calif.
Reynolds Gas Regulator Co., Anderson, Ind.
Standard Remote Control Valve Co., South Pasadena, Calif.
Thermac Co., Los Angeles, Calif.
Weldit, Inc., Detroit, Mich.

VALVES, HUMIDIFIER, WATER LEVEL

Beckett & Co., Thomas, Dallas, Texas.
Fisher Governor Co., Marshalltown, Iowa.
General Controls Co., Glendale, Calif.
Imperial Brass Mfg. Co., Chicago, Ill. (Saddle Valve)
McDonnell & Miller, Inc., Chicago, Ill.
Maid-O'-Mist, Inc., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Morey, Dan, Los Angeles, Calif.
Skuttle Mfg. Co., Detroit, Mich.
Viking Air Conditioning Corp., Cleveland, Ohio.

VALVES, REFRIGERATION, EXPANSION, THERMOSTATIC

Alco Valve Co., St. Louis, Mo.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
General Controls Co., Glendale, Calif.
Mayson Mfg. Co., Detroit, Mich.
Tenney Engineering, Inc., Newark, N. J.
X L Refrigerating Co., Chicago, Ill.

VALVES, REFRIGERATION, WATER REGULATING, PRESSURE OR TEMPERATURE ACTUATED

Aminco Refrigeration Products Co., Detroit, Mich.
Art Valve Co., Chicago, Ill.
Bailey Co., Chas. M., San Francisco, Calif.
Cash Co., A. W., Decatur, Ill.
Farris Engineering Corp., Palisades Park, N. J.
Foster Engineering Co., Union, N. J.
General Controls Co., Glendale, Calif.
Klipfel Mfg. Co., Hamilton, Ohio.
McDonnell & Miller, Inc., Chicago, Ill.
Mayson Mfg. Co., Detroit, Mich.
Mueller Brass Co., Port Huron, Mich.
Perfection Refrigeration Parts Co., Harvey, Ill.
Sarco Co., Inc., New York, N. Y.
Shank Co., Cyrus, Chicago, Ill.

VALVES, SADDLE

See Fittings, Humidifier, Water Line

VALVES, SOLENOID

A-P Controls Corp., Milwaukee, Wis.
Alco Valve Co., St. Louis, Mo.
Atkomatic Valve Co., Indianapolis, Ind.
Automatic Switch Co., Orange, N. J.
Barber-Colman Co., Rockford, Ill.
Barksdale Valves, Los Angeles, Calif.
Bellows Co., Akron, Ohio.
Cooper Co., Clark, Palmyra, N. J.
Cutler-Hammer, Inc., Milwaukee, Wis.
Davis Regulator Co., Chicago, Ill.
Detroit Controls Corp., Detroit, Mich.
Electrimatic Co., Affil., Jas. P. Marsh Corp., Skokie, Ill.
Engelhard, Inc., Chas., East Newark, N.J.
Erickson Specialty Co., Cohoes, N. Y.
Frick Co., Waynesboro, Pa.
Furnas Electric Co., Batavia, Ill.
General Controls Co., Glendale, Calif.
Grove Regulator Co., Oakland, Calif.
Hays Mfg. Co., Erie, Pa.
Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Hook & Ackerman, Inc., New York, N. Y.
Hubbell Corp., Mundelein, Ill.
Hunt & Son, Inc., C. B., Salem, Ohio.
Johnson Corp., The, Three Rivers, Mich.
Keckley Co., O. C., Chicago, Ill.
Lammert & Mann Co., Chicago, Ill.
Locke Regulator Co., Salem, Mass.
McDonnell & Miller, Inc., Chicago, Ill.
McRae Valve Co., Los Angeles, Calif.
Maid-O'-Mist, Inc., Chicago, Ill.
Mercoid Corp., Chicago, Ill.
Marsh Corp., Jas. P., Skokie, Ill.
Milwaukee Gas Specialty Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Nicholson & Co., W. H., Wilkes-Barre, Pa.
Paul Valve Corp., New York, N. Y.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Pfening Co., Fred D., Columbus, Ohio.
R-S Products Corp., Philadelphia, Pa.
Ruggles-Klingemann Mfg. Co., Salem, Mass.
Sarco Co., Inc., New York, N. Y.

Sarcotherm Controls, Inc., New York, N. Y.
Scaky Bros., Inc., Chicago, Ill.
Skinner Electric Valve Div., Skinner Chuck Co., Norwalk, Conn.
Sporlan Valve Co., St. Louis, Mo.
Square D Co., Detroit, Mich.
Square D Co., Industrial Controller Div., Milwaukee, Wis.
Superior Controls Co., Inc., Los Angeles, Calif.
Supreme Electric Products Corp., Rochester, N. Y.
Taylor-Winfield Corp., Warren, Ohio.
Vapor Heating Corp., Chicago, Ill.
White-Rodgers Electric Co., St. Louis, Mo.

VANES, DUCT TURNING, INSIDE DUCTS

Air Devices, Inc., New York, N. Y.
Anemostat Corp. of America, New York, N. Y. (Equalizing deflectors)
Barber-Colman Co., Rockford, Ill.
Register & Grille Mfg., Co., Inc., Brooklyn, N. Y.
Titus Mfg., Corp., Waterloo, Iowa.
Tuttle & Bailey, Inc., New Britain, Conn.

VENTILATOR AND FILTER UNITS, WINDOW

Airgard Mfg. Co., Chicago, Ill.
Berns Mfg. Co., Chicago, Ill.
Ilg Electric Ventilating Co., Chicago, Ill.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Meier Electric & Machine Co., Inc., Indianapolis, Ind.
Mellish & Murray Co., Chicago, Ill.
National Appliance Co., Detroit, Mich.
Reed Unit-Fans, Inc., New Orleans, La.
Somers, Inc., H. J. Detroit, Mich.
Trade-Winds Motorfans, Inc., Los Angeles, Calif.
Unified Air Conditioner Co., Duluth, Minn.
Utility Appliance Corp., Los Angeles, Calif.

VENTILATORS

Roof, Fan

Accurate Sheet Metal & Mfg. Works, Chicago, Ill.
Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.
Aeolus Dickinson, Chicago, Ill.
Aerovent Fan Co., Piqua, Ohio.
Airjet Ventilator Co., Pasadena, Calif.
Air Controls, Inc., Cleveland, Ohio.
Aladdin Heating Corp., Oakland, Calif.
Allen Ventilator Div. Production Planning Co., Rochester, Mich.
American Blower Corp., Detroit, Mich.
American Coolair Corp., Jacksonville, Fla.
American-Larson Ventilating Co., Pittsburgh, Pa.
American Steel Band Co., Pittsburgh, Pa.
Ammerman Co., C. L., Minneapolis, Minn.
Arex Co., Chicago, Ill.
Bar-Brook Mfg. Co., Inc., Shreveport, La.
Bertram Co., Harvey P., Cincinnati, Ohio.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Bishop Co., R. H. Champaign, Ill.
Breidert Co., G. C., Los Angeles, Calif.
Burt Mfg. Co., Akron, Ohio.
Century Fan & Ventilator Co., Stamford, Conn. (Turbine)
Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
Chicago Blower Corp., Franklin Park, Ill.
Chicago Fan & Fin Coil Co., Chicago, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Clay Equipment Corp., Cedar Falls, Iowa.
Cook Co., Loren, Berea, Ohio.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Davidson Fan Co., Newton, Mass.
DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Diehl Mfg. Co., Somerville, N. J.
Dual-Air Fan Corp., South Elgin, Ill.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Empire Ventilation Equipment Co., Long Island City, N. Y.
Fingles Co., Baltimore, Md.
Gallaher Co., Omaha, Nebr.
Gehri Co., Tacoma, Wash.
Hartzell Propeller Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Howes-Woods Co., Cambridge, Mass.
Ilg Electric Ventilating Co., Chicago, Ill.
International Engineering, Inc., Dayton, Ohio.
International Metal Products Co., Phoenix, Ariz.
Iona Ventilator Co., Inc., Philadelphia, Pa.
Iron Lung Ventilator Co., Cleveland, Ohio.
Jenn Air Products Co., Indianapolis, Ind.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
Joy Mfg. Co., Pittsburgh, Pa.
King Co., Owatonna, Minn.
Lee & Son Co., Thomas, Cincinnati, Ohio.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Lumm Co., A. H., Toledo, Ohio.
M & E Mfg. Co., Indianapolis, Ind.
Martin Fan & Blower Co., Chicago, Ill.
Mellish & Murray Co., Chicago, Ill.
Mountain States Equipment Co., Denver, Ohio.
Muckle Mfg. Co., Owatonna, Minn.
Newcomb-Detroit Co., Detroit, Mich.
New York Blower Co., Chicago, Ill.
Octagon Ventilator Co., Chicago, Ill.
Overly Mfg. Co., Greensburg, Pa.
Pennsylvania Wire Glass Co., Philadelphia, Pa.
Peerless Electric Co., Warren, Ohio.
Penn Ventilator Co., Philadelphia, Pa.
Pennsylvania Wire Co., Philadelphia, Pa.
Riester & Thesmacher Co., Cleveland, Ohio.
Robbins & Myers, Inc., Springfield, Ohio.
Robertson Co., H. H., Pittsburgh, Pa. (Round-Rectangular)
Royal Ventilator Co., Philadelphia, Pa.
Somers, Inc., H. J., Detroit, Mich.
Swartwout Co., Cleveland, Ohio.
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Trane Co., The, LaCrosse, Wis.
Truflo Fan Co., Harmony, Pa.
Uno Ventilator Co., Malden, Mass. (Turbine)
Van Noorden Co., E., Boston, Mass.
Waverly Heating Supply Co., Boston, Mass.
Western Engineering & Mfg. Co., Venice, Calif.
Wind-Way Fan & Ventilator Co., New Orleans, La.
Wing Mfg. Co., L. J., Linden, N. J.
Winkler & Sons, Inc., A. E., Milwaukee, Wis.

Roof, Gravity

Accurate Sheet Metal & Mfg. Works, Chicago, Ill.
Aeolus Dickinson, Chicago, Ill.
Air Control Products, Inc., Coopersville, Mich.
Air Devices, Inc., New York, N. Y.
Airjet Ventilator Co., Pasadena, Calif.
Allen Ventilator Div. Production Planning Co., Rochester, Mich. (Turbine)
American-Larson Ventilating Co., Pittsburgh, Pa.
American Steel Band Co., Pittsburgh, Pa.
Ammerman Co., C. L., Minneapolis, Minn.
Appleton Supply Co., Inc., Appleton, Wis.
Arex Co., Chicago, Ill.
Autoforce Ventilating System, Boston, Mass.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Breidert Co., G. C., Los Angeles, Calif.
Burt Mfg. Co., Akron, Ohio.
Century Fan & Ventilator Co., Stamford, Conn.
Clay Equipment Corp., Cedar Falls, Iowa.
Danzer Metal Works Co., Hagerstown, Md.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Empire Ventilation Equipment Co., Long Island City, N. Y.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Fingles Co., Baltimore, Md.
Firecraft Corp., Chicago, Ill.
Gehri Co., Tacoma, Wash.
Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Howes-Woods Co., Cambridge, Mass.
Inland Steel Products Co., Milwaukee, Wis.
International Metal Products Co., Phoenix, Ariz.
Iona Ventilator Co., Inc., Philadelphia, Pa.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
King Co., Owatonna, Minn.
Klauer Mfg. Co., Dubuque, Iowa.
LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
Lee & Son Co., Thomas, Cincinnati, Ohio.
Leslie Welding Co., Chicago, Ill.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Lumm Co., A. H., Toledo, Ohio.
M & E Mfg. Co., Indianapolis, Ind.
Martin Fan & Blower Co., Chicago, Ill.
Mellish & Murray Co., Chicago, Ill.
Moeschl-Edwards Corrugating Co., Inc., Cincinnati, Ohio.
National Metal Fabricators, Chicago, Ill.
Newcomb-Detroit Co., Detroit, Mich.
Octagon Ventilator Co., Chicago, Ill.
Overly Mfg. Co., Greensburg, Pa.
Penn Supply & Metal Corp., Philadelphia, Pa.
Penn Ventilator Co., Philadelphia, Pa.
Pennsylvania Wire Glass Co., Philadelphia, Pa.
Plasteel Products Corp., Washington, Pa.

Puhl & Hepper Mfg. Co., Inc., St. Louis, Mo.
Ralph Mfg. Co., Inc., Wadsworth, Ohio.
Riggin Metal Products, Inc., Kankakee, Ill.
Robertson Co, H. H., Pittsburgh, Pa. (Monitor)
Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.
Royal Ventilator Co., Philadelphia, Pa.
Ryniker Steel Products Co., Billings, Mont.
St. Paul Corrugating Co., St. Paul, Minn.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Simpson Screen Co., Oakland, Calif.
Sioux Steel Co., Sioux Falls, S. D.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Souther Iron Co., E. E., St. Louis, Mo.
Standard Furnace Supply Co., Ltd., Omaha, Nebr.
Standard Ventilator Co., Lewisburg, Pa.
Swartwout Co., Cleveland, Ohio.
Thor Metal Products Co., Inc., Syracuse, N. Y.
Tierney Rotor Ventilator Co., Minneapolis, Minn.
Tiffin Art Metal Co., Tiffin, Ohio.
Uno Ventilator Co., Malden, Mass.
Vallas, Lionel, Chicago, Ill.
Van Noorden Co., E., Boston, Mass.
Walker Mfg. & Sales Corp., St. Joseph, Mo.
Warner Ventilator Co., LaGrange, Ind. (Spinner)
Waverly Heating Supply Co., Boston, Mass.
Western Engineering & Mfg. Co., Venice, Calif.
Willis Steel Corp., Galesburg, Ill.
Winkler & Sons, Inc., A. E., Milwaukee, Wis.
York Corrugating Co., York, Pa.

Ventilating System

Aeolus Dickinson, Chicago, Ill.
Air Control Products, Inc., Coopersville, Mich.
American Steel Band Co., Pittsburgh, Pa.
Auer Register Co., Cleveland, Ohio.
Barber-Colman Co., Rockford, Ill.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Elgo Shutter & Mfg. Co., Detroit, Mich.
Hart & Cooley Mfg. Co., Holland, Mich.
Ilg Electric Ventilating Co., Chicago, Ill.
Inland Steel Products Co., Milwaukee, Wis.
King Co., Owatonna, Minn.
Kool Air Engineering Co., San Bernardino, Calif.
Knowles Mushroom Ventilator Co., Upper Montclair, N. J.
Lumm Co., A. H., Toledo, Ohio.
Martin Fan & Blower Co., Chicago, Ill.
Miller & Doing, Brooklyn, N. Y.
Penn Ventilator Co., Philadelphia, Pa.
Robbins & Myers, Inc., Springfield, Ohio.
Tuttle & Bailey, Inc., New Britain, Conn.
United States Register Co., Battle Creek, Mich.

VIBRATION ISOLATORS

See Bases and Pads

WARM AIR REGISTER SHIELDS

See Shields, Warm Air Register

WASHERS, AIR, HEATING AND VENTILATING

(Capacity 4,000 c.f.m. and up)

Air & Refrigeration Corp., New York, N. Y.
Alton Mfg. Co., Dallas, Texas.
American Blower Corp., Detroit, Mich.
Bayley Blower Co., Milwaukee, Wis.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Buffalo Forge Co., Buffalo, N. Y.
Carrier Corp., Syracuse, N. Y.
Centri-Spray Co., Detroit, Mich
Clarage Fan Co., Kalamazoo, Mich.
Columbus Heating & Ventilating Co., Columbus, Ohio.
Comfort Products Corp., Dallas, Texas.
Continental Air Filters, Inc., Louisville, Ky.
Furblo Co., Hermansville, Mich.
Mellish & Murray Co., Chicago, Ill.
Mountain States Equipment Co., Denver, Colo.
New York Blower Co., Chicago, Ill.
Northern Blower Co., Cleveland, Ohio.
Peters-Dalton, Inc., Detroit, Mich.
Spray Engineering Co., Somerville, Mass.
Strandwitz & Co., Inc., W. J., Camden, N. J.
Tenny Engineering, Inc., Newark, N. J.
Trane Co., The, LaCrosse, Wis.
Utility Appliance Corp., Los Angeles, Calif.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
York Corp., York, Pa.

WATERPROOFING

(Coating material)

American Fluresit Co., Cincinnati, Ohio.
American Steel Band Co., Pittsburgh, Pa.
Armstrong Cork Co., Lancaster, Pa.
Angier Corp., Framingham, Mass.
Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
Blue Ridge Talc Co., Henry, Va.
Cabot, Inc., Samuel, Boston, Mass.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Carter Paint Co., Liberty, Ind.
Cheesman-Elliot Co., Inc., Brooklyn, N. Y.
Flintkote Co., New York, N. Y.
Galvanite Corp., New York, N. Y.
Glidden Co., Cleveland, Ohio.
Henderson & Co., Peter, New York, N. Y. (Coating)
Horn Co., Inc., A. C., Long Island City, N. Y.
Industrial Metal Protectives, Dayton, Ohio.
Koppers Co., Inc., Pittsburgh, Pa.
Lehon Co., Chicago, Ill.
Metropolitan Refining Co., Inc., Long Island City, N. Y.
Nebel Mfg. Co., Cleveland, Ohio.
Pabco Products Inc., San Francisco, Calif.
Reilly Tar & Chemical Corp., Indianapolis, Ind.
Ruberoid Co., New York, N. Y.
Sonneborn Sons, Inc., L., New York, N. Y.
Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
Tamms Industries Inc., Chicago, Ill.
Toch Brothers, Inc., Staten Island, N. Y.
Truscon Laboratories, Detroit, Mich.
Wasco Flashing Co., Cambridge, Mass.
X-Pando Corp., Long Island City, N. Y.

WATER HEATING COILS, FIREPOT

See Coils, Fire Pot, Domestic Hot Water

WELDERS

Arc

Air Reduction Sales Co., New York, N. Y.
Birdsell Mfg. Co., Palo Alto, Calif. (ac)
Borm Mfg. Co., Elgin, Ill. (ac)
Central Transformer Corp., Pine Bluff, Ark. (ac)
Electric Arc, Inc., Newark, N. J.
Ergolyte Mfg. Co., Philadelphia, Pa.
Eutectic Welding Alloys Corp., Flushing, N. Y. (ac)
Fern, Ralph, Scranton, Pa.
Gas Arc Supply, Philadelphia, Pa. (gas)
General Electric Co., Schenectady, N. Y.
Hammett Electric Mfg. Co., Kansas City, Mo.
Hampton Electric Mfg. Co., Pittsburgh, Pa.
Harnischfeger Corp., Milwaukee, Wis. (Ac & dc)
Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Hobart Bros. Co., Troy, Ohio. (Ac & dc)
Hollup Corp., Div. National Cylinder Gas Co., Chicago, Ill.
Lee Co., K. O., Aberdeen, S. D. (ac)
Lincoln Electric Co., Cleveland, Ohio.
Marquette Mfg. Co., Inc., Minneapolis, Minn. (ac)
Metal & Thermit Corp., New York, N. Y. (ac & dc)
Mid-States Welder Mfg. Co., Chicago, Ill. (ac)
Miller Electric Mfg. Co., Inc., Appleton, Wis. (ac & dc)
National Cylinder Gas Co., Chicago, Ill. (ac & dc)
Nelson Specialty Welding Equipment Corp., San Leandro, Calif. (Stud welder)
Nelson Stud Welding Div. Gregory Industries, Inc., Lorain, Ohio. (dc)
Precision Welder Mfg. Co., Chicago, Ill.
Progressive Welder Sales Co., Detroit, Mich. (ac & inert)
Smith Corp., A. O., Milwaukee, Wis. (ac, dc)
Smith Welding Equipment Corp., Minneapolis, Minn. (ac)
Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa. (ac)
Trindl Products, Ltd., Chicago, Ill. (ac)
Westinghouse Electric Corp., Pittsburgh, Pa.
Will-Weld Mfg. Co., Inc., Omaha, Nebr. (ac)

Projection

Acme Electric Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Milwaukee, Wis.
Agnew Electric Co., Milford, Mich.
Central Transformer Corp., Pine Bluff, Ark.
Eisler Engineering Co., Newark, N. J.

Federal Machine & Welder Co., Warren, Ohio.
National Electric Welding Machines Co., Bay City, Mich.
Peer, Inc., Benton Harbor, Mich.
Progressive Welder Sales Co., Detroit, Mich.
Rex Welder & Engineering Co., Kansas City, Mo.
Sciaky Bros., Inc., Chicago, Ill.
Sight Feed Generator Co., West Alexandria, Ohio.
Spotweld Co., Cleveland, Ohio.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., Warren, Ohio.
Thomson Electric Welder Co., Lynn, Mass.
Universal Welder Corp., Cleveland, Ohio.
Welding Machines Mfg. Co., Detroit, Mich.

Resistance

Acme Electric Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Milwaukee, Wis.
Agnew Electric Co., Milford, Mich
Banner Products Co., Milwaukee, Wis.
Central Transformer Corp., Pine Bluff, Ark.
DoALL Co., Des Plaines, Ill.
Eisler Engineering Co., Newark, N. J.
Expert Welding Machine Co., Detroit, Mich.
Federal Machine & Welder Co., Warren, Ohio.
Micro Products Co., Chicago, Ill.
National Electric Welding Machines Co., Bay City, Mich.
Peer, Inc., Benton Harbor, Mich.
Progressive Welder Sales Co., Detroit, Mich.
Rex Welder & Engineering Co., Kansas City, Mo.
Sciaky Bros., Inc., Chicago, Ill.
Spotweld Co., Cleveland, Ohio.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., Warren, Ohio.
Thomson Electric Welder Co., Lynn, Mass.
Universal Welder Corp., Cleveland, Ohio.

Seam

Acro Welder Mfg. Co., Milwaukee, Wis.
Banner Products Co., Milwaukee, Wis.
Central Transformer Corp., Pine Bluff, Ark.
Federal Machine & Welder Co., Warren, Ohio.
National Electric Welding Machines Co., Bay City, Mich.
Progressive Welder Sales Co., Detroit, Mich.
Sciaky Bros., Inc., Chicago, Ill.
Spotweld Co., Cleveland, Ohio.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., Warren, Ohio.
Thomson Electric Welder Co., Lynn, Mass.
Universal Welder Corp., Cleveland, Ohio.
Victor Equipment Co., Welding Equipment Div., San Francisco, Calif.
Welding Machines Mfg. Co., Detroit, Mich.

Spot

Acme Electric Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Milwaukee, Wis.
Agnew Electric Co., Milford, Mich.
Alphil Spot Welding Co., Brooklyn, N. Y.
Banner Products Co., Milwaukee, Wis.
Birdsell Mfg. Co., Palo Alto, Calif.
Central Transformer Corp., Pine Bluff, Ark.
Eisler Engineering Co., Newark, N. J.
Electric Arc, Inc., Newark, N. J.
Federal Machine & Welder Co., Warren, Ohio.
Fern, Ralph, Scanton, Pa.
Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Micro Products Co., Chicago, Ill.
Mid-States Welder Mfg. Co., Chicago, Ill. (Portable)
Miller Electric Mfg. Co., Inc., Appleton, Wis.
National Electric Welding Machines Co., Bay City, Mich.
National Cylinder Gas Co., Chicago, Ill.
Peer, Inc., Benton Harbor, Mich.
Progressive Welder Sales Co., Detroit, Mich.
Rex Welder & Engineering Co., Kansas City, Mo.
Sciaky Bros., Inc., Chicago, Ill.
Spotweld Co., Cleveland, Ohio.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., Warren, Ohio.
Thomson Electric Welder Co., Lynn, Mass.
Universal Welder Corp., Cleveland, Ohio.
Weldex, Inc., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.

WELDING ROD

See Rod, Welding

WELDING TORCHES

See Torches, Brazing, Cutting, Welding

WHEELS, BLOWER

Air Controls, Inc., Cleveland, Ohio.
Airfan Engineering Co., Los Angeles, Calif.
Bayley Blower Co., Milwaukee, Wis.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Carolina Blower Co., Inc., Greensboro, N. C.
Champion Blower & Forge Co., Lancaster, Pa.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Clarage Fan Co., Kalamazoo, Mich.
Connecticut Blower Co., Hartford, Conn.
General Blower Co., Morton Grove, Ill.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Jan-Air, Inc., Richmond, Ill.
Lau Blower Co., Dayton, Ohio.
Martin Fan & Blower Co., Chicago, Ill.
Mayne Products Co., Dayton, Ohio.
Morrison Products, Inc., Cleveland, Ohio.
New York Blower Co., Chicago, Ill.
Peerless Electric Co., Warren, Ohio.
Revcor, Chicago, Ill.
Schwitzer-Cummins Co., Indianapolis, Ind.
Torrington Mfg. Co., Torrington, Conn.
Trane Co., The, LaCrosse, Wis.
Triangle Mfg. Co., Oshkosh, Wis.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Utility Appliance Corp., Los Angeles, Calif.
Viking Air Conditioning Corp., Cleveland, Ohio.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

WINDOWS, METAL, HOLLOW OR EXTRUDED

Adams Co., Dubuque, Iowa.
Biersach & Neidermeyer Co., Milwaukee, Wis.
Detroit Steel Products Co., Detroit, Mich.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
International Steel Co., Evansville, Ind.
Jamestown Metal Corp., Jamestown, N. Y.
Perkinson, William J., Chicago, Ill.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Russell Co., F. C., Cleveland, Ohio.
Truscon Steel Co., Youngstown, Ohio.
Vallas Lionel, Chicago, Ill.
Willis Steel Corp., Galesburg, Ill.

WIRE GLASS

See Glass, Wire

WIRE

Allegheny Ludlum Steel Corp., Pittsburgh, Pa. (Stainless)
Aluminum Co. of America, Pittsburgh, Pa. (Aluminum)
American Nickeloid Co., Peru, Ill. (Chrome, nickel coated)
American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Armco Steel Corp., Middletown, Ohio. (Stainless steel)
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y. (Lead)
Berger Mfg. Div., Republic Steel Corp., Canton, Ohio. (Galv.)
Bethlehem Steel Co., Bethlehem, Pa. (Plain, galvanized)
Bridgeport Brass Co., Bridgeport, Conn. (Brass, bronze)
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y. (Brass, copper & bronze)
Continental Steel Corp., Kokomo, Ind.
Copperweld Steel Co., Glassport, Pa. (Copper covered steel)
Division Lead Co., Chicago, Ill. (Lead, tin)
Eagle-Picher Co., Cincinnati, Ohio. (Lead)
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
International Nickel Co., Inc., New York, N. Y. (Nickel & nickel alloys)
Jones & Laughlin Steel Corp., Pittsburgh, Pa. (Galvanized)
Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Laclede Steel Co., St. Louis, Mo.
National Lead Co., New York, N. Y. (Lead & tin)
Page Steel & Wire Div., American Chain & Cable Co., Inc., Monessen, Pa. (Carbon steel & stainless steel)
Republic Steel Corp., Cleveland, Ohio. (Steel)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Roebling's Sons Co., John A., Trenton, N. J. (Steel & copper)
Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa. (Aluminum)

Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala. (Steel)
United Wire & Supply Corp., Providence, R. I. (Aluminum, Copper & copper base alloy)
Wickwire Spencer Steel Div., Colorado Fuel & Iron Corp., New York, N. Y.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

WIRING MACHINES
See Machines, Wiring

ZONE CONTROLS
See Controls; Control Systems

NATIONAL ASSOCIATIONS

identified with the warm air heating, residential air conditioning, and sheet metal contracting industries.

Air Conditioning & Refrigerating Machinery Assn., William B. Henderson, Executive Vice Pres., Southern Bldg., Washington 5, D. C.

Aluminum Assn., Donald M. White, Secretary-Treasurer, 420 Lexington Avenue, New York 17, N.Y.

American Gas Assn., H. Carl Wolf, Managing Director, 420 Lexington Avenue, New York 17, N.Y.

American Iron and Steel Institute, Max D. Howell, Executive Director, 350 Fifth Avenue, New York 1, N.Y.

American Society of Heating and Ventilating Engineers, A. V. Hutchinson, Secretary, 62 Worth St., New York 13, N.Y.

American Zinc Institute, Inc., E. V. Gent, Executive Vice President and Secretary, 60 East 42nd Street, New York 17, N. Y.

Anthracite Institute, 101 Park Av., New York 17, N. Y.

Copper & Brass Research Assn., Bertram B. Caddle, Secretary, 420 Lexington Avenue, New York, N.Y.

Gas Appliance Manufacturers Assn., H. Leigh Whitelaw, Managing Director, 60 East 42nd Street, New York 17, N.Y.

National Assn. of Fan Manufacturers, Inc., L. O. Monroe, Secretary-Treasurer, 2159 Guardian Building, Detroit 26, Mich.

National Assn. of Sheet Metal Distributors, Thomas A. Fernley, Jr., Executive Secretary, 505 Arch Street, Philadelphia 3, Pa.

National Heating Wholesalers Assn., Inc., Stuart Rambo, Executive Secretary, 27 E. Monroe St., Chicago, Ill.

National Warm Air Heating & Air Conditioning Assn., George Boeddener, Secretary-Treasurer and Managing Director, 145 Public Square, Cleveland 14, Ohio.

National Warm Air Heating & Air Conditioning Assn., Canadian Chapter, C. B. Taylor, Secretary-Treasurer and Managing Director, Yonge at Deloraine, Toronto 12, Ontario, Canada.

Oil-Heat Institute of America, Inc., Ralph H. L. Becker, Managing Director, 6 East 39th Street, New York 16, N.Y.

Sheet Metal Contractors' National Assn., Inc., Joseph D. Wilder, Executive Secretary, 170 Division Street, Elgin, Ill.

Stoker Manufacturers' Assn., Marc G. Bluth, Executive Secretary, 307 North Michigan Avenue, Chicago 1, Illinois.

Section of

American Artisan

1953 DIRECTORY OF WARM AIR HEATING, RESIDENTIAL AIR CONDITIONING AND SHEET METAL PRODUCTS

[PART 2—TRADE NAMES]

A

AAF—Air Filters. American Air Filter Co., Inc., Louisville, Ky.

ABC—Blower-Washer Units. American Blower Corp., Detroit, Mich.

ABC—Oil Burners. Automatic Burner Corp., Chicago, Ill.

Abrasoweld—Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.

Absoplane—Stainless Steel Sheets. Apollo Metal Works, Chicago, Ill.

ACB—Metal Protecting Paint. Tropical Paint & Oil Co., Cleveland, Ohio.

Ace—Damper Regulators. Martens & Stormoen Co., Boston, Mass.

Acid-Proof—Insulating Cement. Quigley Co., New York, N.Y.

Acmeloy—Electrodes. Acme Electric Welder Co., Los Angeles, Calif.

Acoustiglu—Cement. Hetzel Roofing Products Co., Newark, N. J.

Acoustilite—Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.

Acratherm—Thermostats. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Activ-Air—Air Conditioning Furnaces. Heil Co., Milwaukee, Wis.

Activ-Flame—Oil & Gas Burners. Heil Co., Milwaukee, Wis.

A-D Board—Board for Ducts. Philip Carey Mfg. Co., Cincinnati, Ohio.

Ada-Stic—Insulating Cement. Botfield Refractories Co., Philadelphia, Pa.

Adacast—Refractories. Botfield Refractories Co., Philadelphia, Pa.

Adamant—Insulating Cement, Refractories. Botfield Refractories Co., Philadelphia, Pa.

Adapatch—Refractories. Botfield Refractories Co., Philadelphia, Pa.

Aeracool—Fan Blades, Fans, Louvers and Shutters. Myers Electric Co., Inc., Pittsburgh, Pa.

Aerisweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.

Aerocor—Insulation. Owens-Corning Fiberglas Corp., Toledo, Ohio.

Aerofan—Fans. Pryne & Co., Inc., Pomona, Calif.

Aerofuse—Air Diffusers. Tuttle & Bailey, Inc., New Britain, Conn.

Aerolux—Oil Furnaces. S. T. Johnson Co., Oakland, Calif.

Aeromatic—Furnaces. United Air Heaters, Inc., Seattle, Wash.

Aeromatic Exhauster.—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.

Aeropel—Kitchen Exhaust Fans. American Blower Corp., Detroit, Mich.

Aeroplane—Ventilators. Paul R. Jordan & Co., Inc., Indianapolis, Ind.

Aeroplex—Blowers. Bayley Blower Co., Milwaukee, Wis.

Aeropull—Ventilators. Paul R. Jordan & Co., Inc., Indianapolis, Ind.

Aerovane—Anemometers. Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.

Aerovane—Grilles, Registers. Tuttle & Bailey, Inc., New Britain, Conn.

Afco—Blowers, Blower-Filters, Furnaces and Stokers, Gas and Oil Burners. American Furnace Co., St. Louis, Mo.

Afco Base Blo—Furnaces. American Furnace Co., St. Louis, Mo.

Afco-Counterflo—Furnaces. American Furnace Co., St. Louis, Mo.

Afco Duo Blo—Furnaces. American Furnace Co., St. Louis, Mo.

Afco Master-Gas—Furnaces. American Furnace Co., St. Louis, Mo.

Afco Oil Master—Furnaces. American Furnace Co., St. Louis, Mo.

Affco—Grilles, Louvers. American Foundry & Furnace Co., Bloomington, Ill.

A.G.—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.

Age—Oil Burners. All-Gas Equipment Co., Milwaukee, Wis.

Agile—Welding Electrodes. American Agile Corp., Bedford, Ohio

Agilene—Pipe and Fittings, Plastic Ducts, Plastic Tubing. American Agile Corp., Bedford, Ohio

Agitair—Air Diffusers, Filters, Vanes, Ventilators. Air Devices Inc., New York, N.Y.

Air-Clear—Adsorbers, Electroaire Corp., Long Island City, N. Y.

Air-Con—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

Air Control—Air Conditioning Units, Blowers, Blower-Filter Units, Blower Housings, Coils, Registers, and Blower Wheels. Hastings Air Conditioning Co., Inc., Hastings, Nebr.

Air Controls—Ridge Ventilator. Plasteel Products Co., Washington, Pa.

Air-Dryette Jr.—Dehumidifiers. Solvay Sales Div., Allied Chemical & Dye Corp., New York, N.Y.

Air-Flo—Motor Operated Louvers. Air Conditioning Products Co., Detroit, Mich.

Air Guide—Duct Vanes. Titus Mfg. Corp., Waterloo, Iowa.

Air-Jet—Prefabricated Chimney. General Products Co., Fredericksburg, Va.

Air-Lift—Blowers and Fans. Mauer Engineering, Evanston, Ill.

Air-Max—Roof Ventilators, Ventilating Fans. Gallaher Co., Omaha, Nebr.

Air Meter—Anemometers. Hastings Instrument Co., Inc., Hampton, Va.

Air-Out—Ventilator. Accurate Sheet Metal & Mfg. Works, Chicago, Ill.

Air Power—Ventilating Systems. Martin Fan & Blower Co., Chicago, Ill.

Air-Seel—Oil Burners. Caloroil Burner Corp., Hartford, Conn.

Air Set—Combustion Chambers. Harvey, Inc., Sid, Valley Stream, N. Y.

Air Tumbler—Dust Collectors. Dust Suppression & Engineering Co., Lake Orion, Mich.

Air-Turn—Vanes. Barber-Colman Co., Rockford, Ill.

Air-Van—Roof Ventilators, Blowers, Ventilating Fans. Gallaher Co., Omaha, Nebr.

Air-Vane—Registers. Rock Island Register Co., Rock Island, Ill.

Air-Vent—Roofing Felt. Ruberoid Co., New York, N.Y.

Air Wall—Ducts & Fittings, Registers. General Electric Co., Air Conditioning Div., Bloomfield, N. J.

Air Wave—Ventilating Fans. Trade-Wind Motorfans, Inc., Los Angeles,

Air-X-Hauster—Ventilators. G. C. Breidert Co., Los Angeles, Calif.

Airacoustic—Insulation. Johns-Manville, New York, N.Y.

Airate—Ventilators. Aeolus Dickinson, Chicago, Ill.

Airboy—Blower-Filter Units. Peerless Electric Co., Warren, Ohio.

Aircell—Duct Insulation. Norristown Magnesia & Asbestos Co., Norristown, Pa.

Airco—Electrodes, Flux, Welding Rod, Torches and Welding Equipment. Air Reduction Sales Co., New York, N. Y.

Aire-Flo—Blower-Filters, Furnaces. Lennox Furnace Co., Marshalltown, Iowa.

Aire-RAY-ator—Furnaces. Ray Oil Burner Co., San Francisco, Calif.

Airex—Evaporative Coolers, Blowers, Fans, Washers. Mountain States Equipment Co., Denver, Colo.

Airflo—Pipe, Fittings and Accessories. Inland Steel Products Co., Milwaukee, Wis.

Airfoil—Fans, Fan Blades, Ventilators. Aerovent Fan Co., Piqua, Ohio.

Airfoil—Grilles, Louvers, Registers, Diffusers. Titus Mfg. Corp., Waterloo, Iowa.

Airguide—Hygrometers and Thermometers. Fee & Stemwedel, Inc., Chicago, Ill.

Airidge—Ridge Ventilators. Aeolus Dickinson, Chicago, Ill.

Airistocrat—Fan Blades. Torrington Mfg. Co., Torrington, Conn.

Airjector—Ventilators. Swartwout Co., Cleveland, Ohio.
Airlift—Ventilators. Swartwout Co., Cleveland, Ohio.
Airliner—Fan Blades. Alan E. Burden Co., Los Angeles, Calif.
Airlouver—Louvers. Swartwout Co., Cleveland, Ohio.
Airmat—Throwaway Filters. Airgard Mfg. Co., Chicago, Ill.
Air-Mat—Dust Collectors, Filters, American Air Filter Co., Inc., Louisville, Ky.
Airmover—Ventilators. Swartwout Co., Cleveland, Ohio.
Airo-Flex—Directional Flow Registers. Auer Register Co., Cleveland, Ohio.
Airotor—Blower Wheels. Torrington Mfg. Co., Torrington, Conn.
Airsan—Wire Cloth Filters. Air Filter Corp., Milwaukee, Wis.
Airstat—Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Airway—Louvers and Ventilators. Firecraft Corp., Chicago, Ill.
Airweight—Aluminum Ladders. Newark Ladder & Bracket Co., Inc., Rahway, N. J.
AirXpeler—Exhausters, Fans, Blowers and Ventilators. C. L. Ammerman Co., Minneapolis, Minn.
Aktiv—Cleaning Compound. Turco Products, Inc., Los Angeles, Calif.
Alaco—Vacuum Cleaner. Ace Co., Ocala, Fla.
Alclad—Sheets. Aluminum Company of America, Pittsburgh, Pa.
Alco—Ventilators. A. H. Lumm Co., Toledo, Ohio.
Alcoa—Aluminum Products. Aluminum Co. of America, Pittsburgh, Pa.
Alcuplate—Metal Sheets. General Plate Div., Metals & Controls, Attleboro, Mass.
Alfer—Metal Sheets. General Plate Div., Metals & Controls Corp., Attleboro, Mass.
Alfol Asbestos—Duct Insulation. Reflectal Corp., New York, N. Y.
All-Sol—Flux. L. B. Allen Co., Inc., Chicago, Ill.
Allegheny Metal—Stainless. Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
Allen-Flux—Soldering Flux. L. B. Allen Co., Inc., Chicago, Ill.
Allerton—Furnaces. American-Standard Corp., Pittsburgh, Pa.
Alltite—Insulation. Coast Insulating Product, Los Angeles, Calif.
Alma—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.
Almar—Hand Slitting Machines, Power Flanging Machines. Ward Machinery Co., Chicago, Ill.
Almar Easy—Rotary Slitting Shears. Ward Machinery Co., Chicago, Ill.
Alnifer—Metal Sheets. General Plate Div., Metals & Controls, Attleboro, Mass.
Alnor—Thermometers. Illinois Testing Laboratories, Inc., Chicago, Ill.
Alodine—Aluminum surface treatment. American Chemical Paint Co., Ambler, Pa.
Alpine—Evaporative Coolers. International Metal Products Co., Phoenix, Ariz.
Alsiplate—Metal Sheets. General Plate Div., Metals & Controls, Attleboro, Mass.
Alumaloy EZ Kleen—Air Filters. Research Products Corp., Madison, Wis.
Alumaroll—Metal Awnings. Wagner Awning & Mfg. Co., Cleveland, Ohio.
Alumaweld—Flux and Solder. Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
Alumbrite—Paint. Thompson & Co., Oakmont, Pa.
Alumi-Flux—Soldering Flux. L. B. Allen Co., Inc., Chicago, Ill.
Alumi-Soder—Aluminum Solder. L. B. Allen Co., Inc., Chicago, Ill.
Alumin-nu—Metal Cleaner. NuSteel Co., Chicago, Ill.
Aluminized—Clad Sheets. American Rolling Mill Co., Middletown, Ohio.
Aluminweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
Alumseal—Prefabricated Flashings. Wasco Flashing Co., Cambridge, Mass.
Always Reliable—Soldering Furnaces, Torches. Otto Bernz Co., Rochester, N.Y.
AM—Solder. Alpha Metals, Inc., Jersey City, N.J.
Am-Pe-Co—Blowers, Exhausters. American Machine Products Co., Marshalltown, Iowa.
Amazon—Water Heaters. Mustee Heater Co., Cleveland, Ohio.
Amco—Cabinets (Furnaces, Blowers, Air Conditioners). Atlas Mfg. Co., St. Paul, Minn.
Amco—Flux. American Solder & Flux Co., Philadelphia, Pa.
Amcoil—Air Conditioners. American Coils, Inc., Newark, N. J.
Amer-glas—Air Filters. American Air Filter Co., Inc., Louisville, Ky.
American—Furnaces. Ryniker Steel Products Co., Billings, Mont.
American—Beading and Crimping Machines. Chas. E. Kraus Mfg. Co., Louisville, Ky.
American—Humidity and Temperature Recorders, Thermometers. Manning, Maxwell and Moore, Inc., Stratford, Conn.
American—Water Heaters. Hotstream Heater Co., Cleveland, Ohio.
American HV—Filters. American Air Filter Co., Inc., Louisville, Ky.
Amerock—Cabinet and Casing Hardware. American Cabinet Hardware Corp., Rockford, Ill.
Aminco—Hygrometers, Relays, Thermostats. American Instrument Co., Silver Spring, Md.
AMS—Pumps. American-Marsh Pumps, Inc., Battle Creek, Mich.
Anaconda—Copper and Brass Products. American Brass Co., Waterbury, Conn.
Anchor—Hangers. Royal-Apex Mfg. Corp., Brooklyn, N. Y.
Anchor Brand—Rivets. Townsend Co., New Brighton, Pa.
Anchor Brand—Soldering Flux. Garden City Laboratory Div., Pritchardsons, Chicago, Ill.
AnchorAire—Furnaces. Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Anchorfast—Nails. Independent Nail & Packing Co., Bridgewater, Mass.
Anchorite—Nails. Dickson Weatherproof Nail Co., Evanston, Ill.
Anthra-flo—Coal Fired Air Conditioning Furnaces. Coal-O-Matic Co., Trucksville, Pa.
Anti-Pluvius—Skylights. Hirschman-Pohl Co., Inc., LeRoy, N. Y.
Apartvent—Window Ventilating Fans. Autovent Fan & Blower Div., Herman Nelson Corp., Chicago, Ill.
Apexo—Roof Flashing. Simplex Mfg. Co., Fond du Lac, Wis.
Appton—Pneumatic Hammer. American Pneumatic Tool Co., New York, N.Y.
Apthorp—Oil Burner Nozzles. Boston Machine Works Co., Lynn, Mass.
Aqua-Clear—Rust Preventive. Sudbury Laboratory, South Sudbury, Mass.
Aqua-Scale—Automatic Humidifier. J. P. Glasby Mfg. Co., Bloomfield, N. J.
Aquabar—Roof Cement. Continental Products Co., Euclid, Ohio.
Aquadam—Roof Cement, Waterproofing. Blue Ridge Talc Co., Inc., Henry, Va.
Aquaproof—Caulking Compounds. Paint and Waterproofing. Metropolitan Refining Co., Inc., Long Island City, N.Y.
Aquella—Waterproofing. Peter Henderson & Co., New York, N. Y.
Aqulux—Water Heaters. S. T. Johnson Co., Oakland, Calif.
A&R—Louvers and Shutters. Air & Refrigeration Corp., New York, N. Y.
ARA—Asbestos Return Air Sheets. Grant Wilson, Inc., Chicago, Ill.
Arc-Eng—Air Conditioning Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Arcoflame—Oil Burners. American-Standard, Pittsburgh, Pa.
Arcoil—Furnaces. Standard Arcoil Corp., Newark, N.J.
Arctic Circle—Evaporative Coolers. International Metal Products Company, Phoenix, Ariz.
Arex-Austor—Ventilators. Arex Co., Chicago, Ill.
Arin Accelerator—Louvers and Shutters. Arex Co., Chicago, Ill.
Arin Stationary—Louvers and Shutters. Arex Co., Chicago, Ill.
Arkay—Furnaces. Quiet Automatic Burner Corp., Newark, N. J.
Arlington—Furnaces. American-Standard Corp., Pittsburgh, Pa.
Armorize—Paint. Carter Paint Co., Liberty, Ind.
Armstrong—Compressors. General Machinery Co., Spokane, Wash.
Arrow—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.
Arrowtrol—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Artcraft—Blowers and Furnaces. Chicago Steel Furnace Co., Chicago, Ill.
ASARCO—Sheets and Roofing. Federated Metals Div., American Smelting and Refining Co., New York, N.Y.
Asbestile—Roof Cement. Johns-Manville, New York, N.Y.
Asbestocel—Furnace Insulation. Johns-Manville, New York, N.Y.
Asco—Relays, Switches, Valves. Automatic Switch Co., Orange, N. J.
ASMC—Flux. Farrelloy Co., Philadelphia, Pa.
At-A-Glance—Oil Tank Gauge. Krueger Sentry Gauge Co., Green Bay, Wis.
ATC—Thermostats. Ajax Thermostatic Controls Co., Gates Mills, Ohio.
atc—Welding Timers. Automatic Temperature Control Co., Inc., Philadelphia, Pa.
Atlas—Blowers, Furnaces. International Sales Co., San Francisco, Calif.
Atomick—Nozzles. Maid-O'-Mist, Inc., Chicago, Ill.
Atomist—Humidifiers. American Foundry & Furnace Co., Bloomington, Ill.
Attifan—Fans and Ventilators. Kool Air Engineering Co., San Bernardino, Calif.
Auto—Humidifier Valves. Maid-O'-Mist, Inc., Chicago, Ill.
Auto-Klean—Fuel Oil Filters. Cuno Engineering Corp., Meridan, Conn.
Autocrat—Oil Burners, Air Conditioning Furnaces. Chandler Co., Cedar Rapids, Iowa.
Automat—Gas Burners. National Engineering & Mfg. Co., Kansas City, Mo.
Autostart—Buffers. U. S. Electrical Motors, Inc., Los Angeles, Calif.
Autotherm—Gas Conversion Burner. Hook & Ackerman, Inc., New York, N. Y.

AW—Plates, Sheets, Hardened Masonry Nails. Alan Wood Steel Co., Conshohocken, Pa.

AX—Oil Burners. Aldrich Co., Wyoming, Ill.

Axiflo—Fans. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

Axivane—Fans. Joy Mfg. Co., New Philadelphia, Pa.

B

B-60—Controls. General Controls Co., Glendale, Calif.

BAC—Refrigerating condensers and cooling towers. Baltimore Aircoil Co., Inc., Baltimore, Md.

Bacite—Insulating Cement. Bird Archer Co., Philadelphia, Pa.

Baco—Refractories. Bird Archer Co., Philadelphia, Pa.

Badger—Time Switches. Reliance Automatic Lighting Co., Racine, Wis.

Baffle Mix—Refractories. Walsh Refractories Corp., St. Louis, Mo

Balanced Isolator—Vibration Isolating Pads. Korfund Co., Long Island City, N. Y.

Ball Flame—Oil Burners. Kresno-Stamm Mfg. Co., Palisades Park, N. J.

Balsam-Wool—Flexible Insulation. Wood Conversion Co., St. Paul, Minn.

Bankheat—Oil Burners. S. T. Johnson Co., Oakland, Calif.

Banner—Refractories. Chicago Fire Brick Co., Chicago, Ill.

Bantam—Motors. Small Motors, Inc., Chicago, Ill.

Bantam—Shear. Lincoln Machine Co., Boston, Mass.

Bantam Bully—Air Hammer. Superior Pneumatic & Mfg., Inc., Cleveland, Ohio.

Bar-Ox—Rust Inhibitor. Truscon Laboratories, Detroit, Mich.

Bar Rust—Metal Protecting Paints. Midland Paint & Varnish Co., Cleveland, Ohio.

Barcol—Motors. Barber-Colman Co., Rockford, Ill.

Barrett Specification—Roofing Felt. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

Barry—Pillow Blocks, Pulleys. R. & J. Dick Co., Inc., Passaic, N. J.

Basa—Mallets. Greene, Tweed & Co., North Wales, Pa.

Base Isolator—Vibration Isolating Pads. Korfund Co., Long Island City, N. Y.

Basmor—Air Conditioning Furnace. Bastian-Morley Co., Inc., LaPorte, Ind.

Baso—Gas Pilots. Milwaukee Gas Specialty Co., Milwaukee, Wis.

BB—Blast Gates, Roof Clips, Damper Clips and Tips, Conductor Fittings and Accessories, Snow Guards. Berger Brothers Co., Philadelphia, Pa.

B&B—Louvers & Shutters, Blower Wheels. Bishop & Babcock Mfg. Co., Cleveland, Ohio.

Beckett—Gas Burners. Horsman-Markin Corp., Detroit, Mich.

Beckett Commodore—Oil Burners. R. W. Beckett Corp., Elyria, Ohio.

Belco—Fans, Louvers. G. J. Belter Electric Mfg. Co., St. Louis, Mo.

Beloit—Sheet Metal Machines, Punches. Hendley & Whittemore Co., Beloit, Wis.

Bemis—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.

Benda-Vane—Registers. Rock Island Register Co., Rock Island, Ill.

Bendit—Benders, Press Brakes. Connors & Davis Sales Corp., West Springfield, Mass.

Berloy—Building Products. Berger Mfg. Co., Div. Republic Steel Corp., Canton, Ohio.

Beth-Cu-Loy—Sheets. Bethlehem Steel Co., Bethlehem, Pa.

Better-Bilt—Furnaces. Barnes Heating & Ventilating Co., Long Beach, Calif.

BFC—Gas Burners. Moncrief Furnace & Mfg. Co., Dallas, Tex.

B-H—Building Insulation. Baldwin-Hill Co., Trenton, N. J.

B-Line—Motors. Brown-Brockmeyer Co., Dayton, Ohio.

Bifurcator—Blowers. DeBothezat Fans Div. American Machine & Metals, Inc., East Moline, Ill.

Big Bully—Air Hammers. Superior Pneumatic & Mfg., Inc., Cleveland, Ohio.

Bildrite—Sheathing. Insulite Div. Minnesota & Ontario Paper Co., Minneapolis, Minn.

Billy Penn—Chimney Caps, Gutter and Accessories, Roof Flashings, Mouldings and Trim, Pipe, Ventilators. Penn Supply & Metal Corp., Philadelphia, Pa.

Biltwel—Furnaces. Fraser & Johnston Co., San Francisco, Calif.

Birks—Pittsburgh Lock Opener. Bristol Metal Working Equipment, Hartford, Conn.

Bitumastic—Paint. Koppers Co., Inc., Pittsburgh, Pa.

Bituseal—Paint. Cheesman-Elliot Co., Inc., Brooklyn, N. Y.

Black Arrow—Spray Guns. Black Mfg. Co., Harrison, N.J.

Black Asphalt—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.

Black Diamond—Built-up Roofing. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

Black Lap—Roof Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.

Blazecrete—Refractories. Johns-Manville, New York, N. Y.

Blend Air—Furnaces. Coleman Co., Inc., Wichita, Kans.

Blo-Aire—Blower-Filter Units. Meyer Furnace Co., Peoria, Ill.

Blo-Fan—Fans. Pryne & Co., Inc., Pomona, Calif.

Bloflex—Flexible Hose. American Ventilating Hose Co., New York, N. Y.

Blowertrol—Thermostatic Hydraulic Control. White Mfg. Co., St. Paul, Minn.

Blowette—Blower-Filter Units. Lau Blower Co., Dayton, Ohio.

Blu-Blaze—Chimney Caps, Heaters. Tesco, Inc., Tulsa, Okla.

Blu-Cold—Compressors. Lehigh Mfg. Co., Lancaster, Pa.

Blu-Flame—Incinerators, Gas Burners. Vacuum Gas Burner Co., Olean, N. Y.

Blu-Flex—Hack Saw Blades. Millers Falls Co., Greenfield, Mass.

Blue Flame—Gas Burners. Zink Co., John, Tulsa, Okla.

Blue Flame—Rotary Oil Burners. Caloroil Burner Corp., Hartford, Conn.

Blue-Point—Drills, Tools. Snap-on Tools Corp., Kenosha, Wis.

Blue Ridge—Wire Glass. Libbey-Owens-Ford Glass Co., Toledo, Ohio.

Blue Ring—Conversion Gas Burners. Niagara Motors Corp., Dunkirk, N. Y.

BNCO—Cabinets and Casings. Biersach & Neidermeyer Co., Milwaukee, Wis.

B-N Multi-stage—Oil Burners, Oil Furnaces. Benner-Nawman, Inc., Oakland, Calif.

Bob-Cat—Electric Hoist. Lisbon Hoist & Crane Co., Lisbon, Ohio.

Bonderite—Metal Cleaner. Parker Rust-Proof Co., Detroit, Mich.

Bondwich—Metal Sheets. General Plate Div., Metals & Controls, Attleboro, Mass.

Boomer—Furnaces. Hess-Snyder Co., Massillon, Ohio.

Bosmaco—Heating Equipment. Boston Machine Works Co., Lynn, Mass.

Boston Breeze—Oil Burners. Boston Machine Works Co., Lynn, Mass.

Boston Chrome Steel—Baffles. Boston Machine Works Co., Lynn, Mass.

Boston-Standard—Draft Dampers. Boston Machine Works Co., Lynn, Mass.

Boyer—Power Hammers. Chicago Pneumatic Tool Co., New York, N. Y.

Bradford—Water Heaters. Pennsylvania Range Boiler Co., Philadelphia, Pa.

Brandes—Registers. Roberts Co., S. R., Marshall, Mich.

Branford—Oil Burners. Malleable Iron Fittings Co., Branford, Conn.

Brassweld—Steel Brazing Flux. Sight Feed Generator Co., West Alexandria, Ohio.

Brazaloy—Aluminum, cast iron, copper, magnesium and silver soldering flux. All-State Welding Alloys Co., Inc., White Plains, N. Y.

Brazarc—Electrodes. Universal Welder Corp., Cleveland, Ohio.

Braze Clad—Silver Clad Sheets. Sherman & Co., Flushing, N. Y.

Brazo—Bronze Soldering Flux. Linde Air Products Co., New York, N. Y.

Breese Draftalite—Draft Dampers. Breese Burners, Inc., Santa Fe, N. M.

Breez-Air—Fans. Buffalo Forge Co., Buffalo, N. Y.

Breezebuilder—Fans. Bar-Brook Mfg. Co., Inc., Shreveport, La.

Breezemaster—Fans. Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.

Breezo—Kitchen Exhaust Fans. Buffalo Forge Co., Buffalo, N. Y.

Brentwood—Floor Furnaces, Water Heaters. National Appliances, Inc., Pittsburgh, Pa.

Bressler—Draft Damper Motors. Kol-Master Corp., Oregon, Ill.

Brick-Mix—Plastic Refractory. Chicago Fire Brick Co., Chicago, Ill.

Brilliant—Paint. Calbar Paint & Varnish Co., Philadelphia, Pa.

Brilliant Fire—Space Heaters, Furnaces. Ohio Foundry & Mfg. Co., Steubenville, Ohio.

Bronzend—Electrodes. Arcos Corp., Philadelphia, Pa.

Bronzweld—Cast Iron Brazing Flux. Sight Feed Generator Co., West Alexandria, Ohio.

Bronzoil—Bearings. Dodge Mfg. Corp., Mishawaka, Ind.

Brown—Gas Burners. Sterling Engineering Co., St. Louis, Mo.

Brown Electronik—Humidity and Temperature Recorders, Minneapolis-Honeywell Regulator Co., Minneapolis, Minn

Brownie—Water Heaters. Brown Steel Tank Co., Minneapolis, Minn.

Brownskin—Waterproof Sheathing Paper. Angier Corp., Framingham, Mass.

Bruin—Roofing Paint. Baer Bros., New York, N. Y.

Brule—Incinerators. Goder Incinerator Corp., Chicago, Ill.

BTU—Furnace Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.

Bu-Pro-Fire—Furnaces, Heaters. Temco, Inc., Nashville, Tenn.

Buckeye—Space Heaters. Ohio Stove Co., Portsmouth, Ohio.

Budget—Water Heaters. American-Standard, Pittsburgh, Pa.
Bulldog—Snips and Shears. Wiss & Sons Co., Newark, N. J.
Bulldog—Shear. Lincoln Machine Co., Boston, Mass.
Bundyweld—Tubing. Bundy Tubing Co., Detroit, Mich.
Bunker Hill—Roofing, Sheets and Solder, Northwest Lead Co., Seattle, Wash.
Burnall—Incinerators. General Engineering Co., Bay City, Mich.
But-N-tite—Steel Roofing. St. Paul Corrugating Co., St. Paul, Minn.
Buzzer—Gas Soldering Furnaces. Charles A. Hones, Inc., Baldwin, N. Y.
B & W—Refractories & Furnace Insulation. Babcock & Wilcox Co., New York, N. Y.
BX—Oil Burners. Aldrich Co., Wyoming, Ill.

C

C-10—High Temperature Paint. Laclede-Christy Clay Products Co., St. Louis, Mo.
Cable King—Hoist. Yale & Towne Mfg. Co., Philadelphia, Pa.
California—Water Heaters. W. B. Bastian Mfg. Co., Los Angeles, Calif.
Caloric—Furnaces. Marshall Furnace Co., Marshall, Mich.
Capillary—Air Conditioning Units, Washers, Filters. Air & Refrigeration Corp., New York, N. Y.
Capital—Furnaces. Farris Furnace Co., Springfield, Ill.
Capitolaire—Furnaces. United States Radiator Corp., Detroit, Mich.
Cara-Flux No. 400—Flux solution. Carajon Chemical Co., Inc., Fremont, Mich.
Carbolite—Soot Remover. Ampion Corp., Long Island City, N. Y.
Carbonaire—Oil Burners. Breeze Corps., Inc., Newark, N. J.
Carburetor-Stoker—Industrial Stokers. Woolley Eng. Co., Detroit, Mich.
Cardolite—Caulking Compound and Paint. Irvington Varnish & Insulator Co., Irvington, N. J.
Carex-CP5—Roof Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.
Carey Coating—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.
Careyclad—Metal Protecting Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.
Careyduct—Prefabricated Ducts and Fittings. Philip Carey Co., Cincinnati, Ohio.
Carilloy—Plate. U. S. Steel Co., Pittsburgh, Pa.
Cast-Refract—Baffles. Quigley Co., Inc., New York, N. Y.
Castalu—Blower Wheels. Advance Aluminum Castings Corp., Chicago, Ill.
Castomatic—Solder. Federated Metals Div., American Smelting and Refining Co., New York, N. Y.
Caulk-N-Seal—Caulking Compound. Blue Ridge Talc Co., Inc., Henry, Va.
Caulk-O-Seal—Caulking and Glazing Compounds. Calbar Paint & Varnish Co., Philadelphia, Pa.
Cauxeal—Compounds, X-Pando Corp., Long Island City, N. Y.
CDC—Bearings and Pulleys. Chicago Die Casting Co., Chicago, Ill.
Ce-Co—Caulking Compounds & Paints. Cheesman-Elliot Co., Inc., Brooklyn, N. Y.
C-E Heatmaster—Water Heaters. Combustion Engineering Co., Inc., Chattanooga, Tenn.
Cecotite—Roofing Paint. Cheeseman-Elliot Co., Inc., Brooklyn, N. Y.
Ceil-N-Ventor—Fans. Universal Blower Co., Birmingham, Mich.
Ceil-U-Blanket—Insulation. Masonite Corp., Chicago, Ill.
Cello-Sponge—Evaporators. Viking Air Conditioning Corp., Cleveland, Ohio.
Cellufoam—Duct Insulation. Masonite Corp., Chicago, Ill.
Cementkote—Paint. Tropical Paint & Oil Co., Cleveland, Ohio.
Cemesto—Duct Boards. Celotex Corp., Chicago, Ill.
Center-Finder—Protractor. Interstate Sales Co., New York, N. Y.
Centerflo—Industrial Fans. Holden Fan Co., Detroit, Mich.
Centrifugal—Roof Ventilators. Burt Mfg. Co., Akron, Ohio
Centripeller—Ventilating Fans. Paul R. Jordan & Co., Inc., Indianapolis, Ind.
C-H—Relays, Switches and Valves. Cutler-Hammer, Inc., Milwaukee, Wis.
Challenger—Space Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.
Challenger—Air Conditioning Units. Great National Air Conditioning Corp., Oklahoma City, Okla.
Challenger—Circulating Gas Heaters. Independence Stove & Mfg. Co., Independence, Mo.
Challenger—Fans. Signal Electric Mfg. Co., Menominee, Mich.
Challenger—Furnaces. Wheeling Furnace Corp., Martins Ferry, Ohio.
Challenger—Stokers. Kol-Master Corp., Oregon, Ill.
Chamco—Building Insulation. Chamberlin Co. of America, Detroit, Mich.
Champion—Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
Champion—Water Heaters. Crane Co., Chicago, Ill.
Cheerfulator—Space Heaters. Adams Bros. Mfg. Co., Inc., Pittsburgh, Pa.
Chester—Water Heaters. Aiax Thermostatic Controls Co., Gates Mills, Ohio.
CHFS Co.—Fittings & Accessories. Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
Chicago—Brakes and Presses. Dreis & Krump Mfg. Co., Chicago, Ill.
Chicago—Stokers. Eddy Stoker Corp., Chicago, Ill.
Chicago Steel—Snips and Shears. W A. Whitney Mfg. Co., Rockford, Ill.
Chicago—Toggle and Anchor bolts. Chicago Expansion Bolt Co., Chicago, Ill.
Chico Brikset—Furnace and Insulating Cement, Refractories. Chicago Fire Brick Co., Chicago, Ill.
Chill Air—Evaporative Coolers, Fans, Recirculating Pumps. National Engineering & Mfg. Co., Kansas City, Mo.
Chinook—Heating Coils. Bayley Blower Co., Milwaukee, Wis.
Chore Boy—Conversion Gas Burner. Standard Fuel Engineering Co., Detroit, Mich.
Chromend—Electrodes. Arcos Corp., Philadelphia, Pa.
Chromeweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
Chromtrim—Mouldings and Trim. R. D. Werner Co., Inc., New York, N. Y.
Chronat—Furnace Repairs. National Foundry & Furnace Co., Dayton, Ohio.
Chronotherm—Thermostats. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Chrysler-Airtemp—Heating and Cooling Equipment. Airtemp Div., Chrysler Corp., Dayton, Ohio.
Cibulas—Puttyless Skylights. General Sheet Metal Works, Inc., Bridgeport, Conn.
Cinch—Expansion Bolts, National Lead Co., New York, N. Y.
Cinco—Windows. R. C. Russell Co., Cleveland, Ohio.
Cinkote—Paint. Blue Ridge Talc Co., Inc., Henry, Va.
Cinti—Elbows. Cincinnati Elbow Co., Cincinnati, Ohio.
Circo—Louvers & Shutters, Circulators & Devices Mfg. Corp., New York, N. Y.
Circu-Ray—Furnaces, Heaters. Temco, Inc., Nashville, Tenn.
Circulaire—Wall Furnaces. Hammel Radiator Eng. Co., Los Angeles, Calif.
Circulataire—Furnace Fan. Corlett-Turner Co., Chicago, Ill.
CJB—Bearings. Ahlberg Bearing Co., Chicago, Ill.
C&L—Soldering Furnaces and Torches. Clayton & Lambert Mfg. Co., Louisville, Ky.
Clark—Oil Burners. National Oil Burner Co., Brooklyn, N. Y.
Clason—Snow Guards. M. N. Cartier & Sons Company, Providence, R. I.
Clauss—Snips and Shears. Henkel-Clauss Co., Fremont, Ohio.
Clean Right—Soot Remover. General Filters, Inc., Detroit, Mich.
Cleanaire—Blower-Filter Units. Peerless Furnace and Foundry Co., Indianapolis, Ind.
Clearview—Oil Tank Gauge. Boston Machine Works Co., Lynn, Mass.
Cleveland—Burners, Furnaces. Dornback Furnace & Fdy. Co., Cleveland, Ohio.
Cliffdale—Furnaces. American-Standard Corp., Pittsburgh, Pa.
Clifton—Furnaces. American-Standard Corp., Pittsburgh, Pa.
Climate-Changer—Air Conditioning Units. Trane Co., La Crosse, Wis.
Climate Master—Furnaces. Hess Co., Chicago, Ill.
Climatrol—Air Conditioning Units, Blower-Filter Units, Furnaces, Conversion Burners, Furnace and Smoke Pipe Fittings, Humidifiers, Registers. L. J. Mueller Furnace Co., Milwaukee, Wis.
Clime-Matic—Summer Air Conditioning Units. United Conditioning Corp., Croton Falls, N.Y.
Clincher—Conductor Fittings and Accessories. Inland Steel Products Co., Milwaukee, Wis.
Clipper—Furnaces. Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Clipper—Kitchen Exhaust Fans. Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Clipper—Ventilators. Riggin Metal Products, Inc., Kankakee, Ill.
CM—Cranes, Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
CMH—Machine Tool Conduit. Flexonics Corp., Maywood, Ill.
CMW—Stokers, and Water Heaters. Catskill Metal Works, Catskill, N. Y.
Co-Min-Co—Insulating Cement. United States Mineral Wool Co., South Milwaukee, Wis.
Colawelding—Flux. Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa.
Colbrazing—Flux. Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa.
Colcap—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.
Coldprest—Housings, Commercial Shearing & Stamping Co., Youngstown, Ohio.
Coldstream—Air Conditioning Units. Baker Refrigeration Corp., South Windham, Me.
Cole—Draft Governor. Cole-Sewell Engineering Co., Minneapolis, Minn.

Collopakes—Roofing Paint. Samuel Cabot, Inc., Boston, Mass.

Colonial—Blower-Filter, Oil Burners, Furnaces, Humidifiers, Heaters, Stokers. Green Colonial Furnace Co., Des Moines, Ia.

Colonial—Conductor Heads and Fittings. Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.

Columbia—Air Freshening Compounds. Carbide and Carbon Chemicals Co., Div. Union Carbide & Carbon Corp., New York, N. Y.

Columbia—Furnaces. Sandberg Mfg. Co., Portland, Ore.

Columbia—Insulation. United States Mineral Wool Co., South Milwaukee, Wis.

Columbia—Ventilators. E. E. Souther Iron Co., St. Louis, Mo.

Combi-Matic—Gas-Oil Burner. Siemon Mfg. Co., Kansas City, Mo.

Combustioneer—Gas & Oil Burners, Furnaces, Humidifiers, & Stokers. Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.

Comet—Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.

Comet Exhaustair—Fans and Ventilators. New York Blower Co., Chicago, Ill.

Comfort-Aire—Gas Burners. Chas. M. Olmstead & Co., Detroit, Mich.

Comfort Flo—Furnaces. Montag Stove & Furnace Works, Portland, Ore.

Comfort Master—Controls, Controls Systems. A-P Controls Corp., Milwaukee, Wis.

Comforteer—Space Heaters. Inland Steel Container Co., Chicago, Ill.

Commander—Space Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.

Commander—Furnaces. Peerless Furnace and Foundry Co., Indianapolis, Ind.

Commander—Furnaces. Round Oak Co., Inc., of Indiana, Dowagiac, Mich.

Compact—Blowers. Bishop & Babcock Mfg. Co., Cleveland, Ohio.

Compact—Oil Burners. Breeze Corp., Inc., Newark, N. J.

Compass V-Steel—V-Belts. Goodyear Tire & Rubber Co., Inc., Akron, Ohio.

Concavex—Bearings. Shafer Bearing Corp., Downers Grove, Ill.

Condor—Belts. Raybestos-Manhattan, Inc., Passaic, N. J.

Coni-Vane—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.

Conservoil—Oil Burners. Crane Co., Chicago, Ill.

Consolidated—Presses and Dies. E. W. Bliss Co., Canton, Ohio.

Conterflow—Air Conditioning Furnaces. Western Blower Co., Seattle, Wash.

Controlaire—Furnaces. St. Louis Furnace Mfg. Co., St. Louis, Mo.

Convector—Furnaces. L. J. Mueller Furnace Co., Milwaukee, Wis.

Convector—Humidifiers. Maid-O'-Mist, Inc., Chicago, Ill.

Convertible—Furnaces. Marshall Furnace Co., Marshall, Mich.

Converto—Ventilators. C. L. Ammerman Co., Minneapolis, Minn.

Cool-A-Matic—Air Conditioning Units. Automatic Firing Corp., St. Louis, Mo.

Coolair—Evaporative Cooler Units. Belmetals Mfg. Co., Belmont, Calif.

Coolair—Fans and Ventilators. American Coolair Corp., Jacksonville, Fla.

Cooler-Aire—Air Conditioning Unit. Baltimore Porcelain Steel Corp., Baltimore, Md.

Coolero—Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

Cooper-Kote—Sheet Metal Paint. Coopers Creek Chemical Corp., West Conshohocken, Pa.

Cop-R-Loy—Copper Bearing Steel Sheets. Wheeling Steel Corp., Wheeling, W. Va.

Cop-R-Tex—Thru-Wall Flashing. Wasco Flashing Co., Cambridge, Mass.

Copper-Alloy—Sheets. Inland Steel Co., Chicago, Ill.

Copper-Brite—Metal Finishers. Rossaul Co., New York, N. Y.

Copper-Fabric—Flashing. Wasco Flashing Co., Cambridge, Mass.

Copperseal—Flashing. Wasco Flashing Co., Cambridge, Mass.

Copperskin—Waterproof sheathing paper. Angier Corp., Framingham, Mass.

Copper Steel—Copper Bearing Sheets. U. S. Steel Co., Pittsburgh, Pa.

Cor Ten—Steel Plates. Tennessee Coal & Iron Div., U.S. Steel Corp., Fairfield, Ala.

Coral Designs—Controls. Henry G. Dietz Co., Long Island City, N. Y.

Corinco—Insulation. Cork Insulation Co., Inc., New York, N. Y.

Corkboard—Insulation. Armstrong Cork Co., Lancaster, Pa.

Corkboard—Insulation. Mundet Cork Corp., Brooklyn, N. Y.

Corozone—Ozone Apparatus. Coroaire Heater Corp., Cleveland, Ohio.

Corvette—Water Heaters. Security Mfg. Co., Kansas City, Mo.

Cottrell Process—Collectors. Western Precipitation Corp., Las Angeles, Calif.

Counterflo—Direct Fired Heaters. Dravo Corp., Pittsburgh, Pa.

Cozy—Furnaces. Advance Furnace Co., Wichita, Kans.

CP—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.

C/R—Metal Working Mallets. Chicago Rawhide Mfg. Co., Chicago, Ill.

Crane Basmor—Furnaces. Bastian-Morley Co., Inc., LaPorte, Ind.

Crane-Line—Burners, Fans, Furnaces, Water Heaters, Stokers. Crane Co., Chicago, Ill.

Crary's—Cut-Offs. Galvan Mfg. Co., New Albany, Ind.

Crescent—Furnaces. Green Colonial Furnace Co., Des Moines, Ia.

Crest—Water Heaters. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.

Crestoloy—Tools. Crescent Tool Co., Jamestown, N. Y.

Cristorch—Welding Torch. Hamilton Tool Co., Hamilton, Ohio.

Cromaloy—Stainless Soldering Flux. Linde Air Products Co., New York, N. Y.

Crown Heat King—Gas Conversion Burner. B. G. B. Mfg. Co., Dearborn, Mich.

Crusader—Oil Burners. Bethlehem Fdry. & Mach. Co., Bethlehem, Pa.

Crystal—Paints. Hilo Varnish Corp., Everett, Mass.

Cupromatic—Electric Water Heaters. Cuprometal Mfg. Corp., Corona, N. Y.

Custom-Aire—Furnaces and Heaters. Heating Equipment Mfg. Co., San Francisco, Calif.

Cyclo-Core—Rotary Drill Bits. New England Carbide Tool Co., Cambridge, Mass.

Cyclo-Twist—Masonry Drill Bits. New England Carbide Tool Co., Cambridge, Mass.

Cyclone—Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.

D

Dampchek—Waterproofing. American Fluresit Co., Cincinnati, Ohio

Da-Nite Acratherm—Thermostats. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Daptoblu—Gas Burners. Beck Engineering Combustion Kompany, St. Louis, Mo.

Dasco—Punches, Tools. Damascus Steel Products Corp., Rockford, Ill.

Day-Steel—Pulleys. Dayton Rubber Co., Dayton, Ohio.

Dayton Thorobred—V-Belts. Dayton Rubber Co., Dayton, Ohio.

D & D—Hole Cutter. N. J. Frayn Co., Redwood City, Calif.

De-Sta-Co—Blower Housings and Stampings. Detroit Stamping Co., Detroit, Mich.

Debecote—Paint. Debevoise Co., Brooklyn, N. Y.

Decoseal—Paints. Debevoise Co., Brooklyn, N. Y.

Deflecto—Baffles. Insulation & Refractories Co., Williamson, N. Y.

Deflecto—Grilles. U.S. Air Conditioning Corp., Minneapolis, Minn.

Deflectrol—Duct Turning Vanes. Barber-Colman Co., Rockford, Ill.

Dehydratine—Waterproofing. A. C. Horn Co., Inc., Long Island City, N. Y.

Deion—Time Switches. Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Delco-Heat—Oil Burners and Furnaces. Delco Appliance Div., General Motors Corp., Rochester, N. Y.

Delde—Power Roll Forming. Doelger & Kirsten, Inc., Milwaukee, Wis.

Delphos—Ridge Roll and Roofing. New Delphos Mfg. Co., Delphos, Ohio.

Deoxidine—Metal Protecting Paint. American Chemical Paint Co., Ambler, Pa.

Dereka—Paint. Debevoise Co., Brooklyn, N. Y.

Desert Air—Burners and Furnaces. Central States Mfg. Co., Inc., Arkansas City, Kans.

Desert Ray—Furnaces and Heaters. Hirsh Mfg. Co., Garland, Texas.

Desomatic—Dehumidifiers. Daly, Merritt & Sullivan, Inc., Falls Church, Va.

Detroit LoStoker—Stokers. Detroit Stoker Co., Detroit, Mich.

Detroit Roto Grate Stoker—Stokers. Detroit Stoker Co., Detroit, Mich.

Detroit RotoStoker—Overfeed Spreader Stoker. Detroit Stoker Co., Detroit, Mich.

Detroit UniStoker—Stokers. Detroit Stoker Co., Detroit, Mich.

Dexter Heat Valve—Ventilators. Swartwout Co., Cleveland, Ohio.

DFC—Insulating Cement. Denver Fire Clay Co., Denver, Colo.

Di-Acro—Precision Machines. O'Neil-Irwin Mfg. Co., Lake City, Minn.

Dial—Damper Regulator. Martens & Stormoen Co., Boston, Mass.

Dial—Duct Damper Regulators. Parker-Kalon Corp., New York, N. Y.

Dial-Set—Stokers. Kol-Master Corp., Oregon, Ill.

Diamond—Caulking Compounds, Paint. Thompson & Co., Oakmont, Pa.

Diamond—Smoke Pipe Dampers. Adams Co., Dubuque, Iowa.

Diamond H—Controls, Switches. Hart Mfg. Co., Hartford, Conn.

Dickinson—Ventilators. Aeolus Dickinson, Chicago, Ill.

Dickrope—V-Belts. R. & J. Dick Co., Passaic, N. J.

Diffusaire—Air Diffusers. Hart & Cooley Mfg. Co., Holland, Mich.

Dilecto Sheets—Non-Metallic Sheets. Continental Diamond Fibre Co., Newark, Del.

Directrol—Duct Turning Vanes. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

Divco—Bases & Pads, Brushes, Flashing, Flux, Sheets, Solder. Division Lead Co., Chicago, Ill.

Dixie—Water Heaters. Hotstream Heater Co., Cleveland, Ohio.

Dixie Star—Water Heaters. Hotstream Heater Co., Cleveland, Ohio.

D-O—Air Filters, Odor Adsorbers. Research Products Corp., Madison, Wis.

Do-All—Hammer. Wodack Electric Tool Corp., Chicago, Ill.

Dodge-Timken—Bearings. Dodge Mfg. Corp., Mishawaka, Ind.

Domestigas—Gas Conversion Burners. Thermex Engineering Co., Chicago, Ill.

Do-Mor—Adj. Keyhole Saw. Pioneer Tool Co., Racine, Wis.

Dorex—Odor Absorbers. W. B. Connor Eng. Corp., Danbury, Conn.

Double Diamond—Psychrometers, Relays, Switches, Thermometers. H-B Instrument Co., Philadelphia, Pa.

Double-Duty—Oil Burners. Breeze Corps., Inc., Newark, N. J.

Double-Seal—Humidifier Fittings. Hays Mfg. Co., Erie, Pa.

Douglas—Furnaces, Stokers. Omaha Stove Repair Works, Inc., Omaha, Nebr.

Dover—Conductor Fittings & Wire Hangers. Ohio Wire Products Co., Dover, Ohio.

DovRloy—Sheets. Reeves Steel & Mfg. Co., Dover, Ohio.

Dowmetal—Plates, Sheet, Light Weight Shapes, Welding Rod, Sheets. Dow Chemical Co., Midland, Mich.

Downflame—Gas-Oil Burners, Floor Furnaces. United Air Heaters, Inc., Seattle, Wash.

Downflo—Highboy Furnaces. United Air Heaters, Inc., Seattle, Wash.

Draftbooster—Blowers. Breese Burners, Inc., Santa Fe, N. Mex.

Draft-A-Justor—Barometric Dampers. Preferred Utilities Mfg. Corp., New York, N. Y.

Draft KoreKtor—Damper. Cole-Sewell Engineering Co., Minneapolis, Minn.

Draft-O-Stat—Barometric Dampers. Hotstream Heater Co., Cleveland, Ohio.

Draftender—Gravity Furnace Control Systems. Penn Controls, Inc., Goshen, Ind.

Draftrite—Draft Gages. Bacharach Industrial Instrument Co., Pittsburgh, Pa.

Dri-Air—Dehumidifiers. Tamms Industries Inc., Chicago, Ill.

Dri-N-Tite—Roof Cement. A. C. Horn Co., Inc., Long Island City, N. Y.

Drifilter—Filters. American Air Filter Co., Inc., Louisville, Ky.

Drifilter—Filters. Airgard Mfg. Co., Chicago, Ill.

Dri-Lap—Sheet Metal Roofing. Newport Steel Corp., Newport, Ky.

Drive-it—Power Hammers. Powder Power Tool Corp., Portland, Oreg.

Driwal—Waterproofing Compound. Glidden Co., Cleveland, Ohio.

Drouvelite—Skylights. Hirschman-Pohl Co., Inc., LeRoy, N. Y.

Dry Kiln—Furnace Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.

Dual-A-Fire—Gas-Oil Combination Burners and Furnaces. Automatic Firing Corp., St. Louis, Mo.

Dual-Clone—Blow Pipe Collectors. Day Co., Minneapolis, Minn.

Dual-Dial—Tank Gauge. Rochester Mfg. Co., Inc., Rochester, N. Y.

Dual-Matic—Gas-Oil Combination Burners. J. C. Junior Co., Kansas City, Mo.

Dualvent—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.

Dubblseal—Sheeting. Masonite Corp., Chicago, Ill.

Duclean—Metal Cleaner. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

Duco—Enamels and Lacquers. E. I. du Pont de Nemours & Co., Wilmington, Del.

Ducon—Controls, Soldering Coppers. Dual Remote Control Co., Garden City, Mich.

Duct Soundliner—Duct Insulation. Baldwin-Hill Co., Trenton, N. J.

Ductboard—Prefabricated Ducts. Sall Mountain Co., Hamilton, Ohio.

Ducti-Linx—Connectors, Tubing. Gray-Wilson Co., Detroit, Mich.

Ducturns—Vanes. Tuttle & Bailey, Inc., New Britain, Conn.

Ductype—Fans. South Bend Air Products, Inc., South Bend, Ind.

Dulux—Enamels, Lacquers and Paints. E. I. du Pont de Nemours & Co., Wilmington, Del.

Duo-Gyrovane—Fans. Dual-Air Fan Corp., South Elgin, Ill.

Duo-Lock—Pittsburgh Lock Formers. Riverside Machinery Co., Minneapolis, Minn.

Duplex Twin—Vibration Isolating Pads. Korfund Co., Long Island City, N.Y.

Dura-Flex—Directional Flow Registers. Auer Register Co., Cleveland, Ohio.

Dura-Line—Heating & Ventilating Registers. Auer Register Co., Cleveland, Ohio.

Dura-Sheen—Flues and Roof Jacks. Baltimore Porcelain Steel Corp., Baltimore, Md.

DuraBilt—Gravity Registers. Auer Register Co., Cleveland, Ohio.

Duraflex—Stokers. Canton Stoker Corp., Canton, Ohio.

Duralite—Refractories. Chicago Fire Brick Co., Chicago, Ill.

Duranite—Paint. Atlas Powder Co., North Chicago, Ill.

Duridine—Chemical Cleaner. American Chemical Paint Co., Ambler, Pa.

Durolite—Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.

Duronze—Plates and Sheets. Bridgeport Brass Co., Bridgeport, Conn.

Dust Arrester—Dust and Lint Collectors. American Air Filter Co., Inc., Louisville, Ky.

Dustay—Throwaway Air Filters. Detroit Air Filter Div., Air-Maze Corp., Cleveland, Ohio

DustStop—Dust Collectors. Aget-Detroit Co., Ann Arbor, Mich.

DustStop—Filters. Owens-Corning Fiberglas Corp., Toledo, Ohio.

Dutch Boy—Paints, Solder. National Lead Co., New York, N. Y.

Dux-Sulation—Duct Insulation. Grant Wilson, Inc., Chicago, Ill.

Dynafan—Ventilators. Penn Ventilator Co., Philadelphia, Pa.

Dynaflow—Blowers and Fans. South Bend Air Products, Inc., South Bend, Ind.

Dynetric—Balancing Equipment. Gisholt Machine Co., Madison, Wis.

E

Eagle Star—Solder. Eagle-Picher Co., Cincinnati, Ohio.

Eagle Super—Flashing. Eagle-Picher Co., Cincinnati, Ohio.

Eagle Super "66"—Furnace Insulation. Eagle-Picher Co., Cincinnati, Ohio.

Eagle Supertemp—Duct Insulation. Eagle-Picher Co., Cincinnati, Ohio.

Easternoil—Oil Burners. Eastern Oil & Equipment Co., Portland, Me.

Easy-Flo—Solder. Handy & Harman, New York, N. Y.

Easy-Slip—Gutters. La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.

Easyweld—Electrodes. Universal Welder Corp., Cleveland, Ohio.

E. C. Cord—V-Belts. Goodyear Tire & Rubber Co., Inc., Akron, Ohio.

Echo—Ceiling Ventilators. Elgo Shutter & Mfg. Co., Detroit, Mich.

Eclipse—Refrigerating Compressors. Frick Co., Waynesboro, Pa.

Econo-miser—Oil Burners. Green Colonial Furnace Co., Des Moines, Iowa.

Econocol—Stokers. Cotta Transmission Co., Rockford, Ill.

Economite—Gas Burners. Mid-Continent Metal Products Co., Chicago, Ill.

Economy—Power Hack Saws. F. L. Robertson, Buffalo, N. Y.

Economy—Furnaces. International Heater Co., Utica, N. Y.

Economy—Gas Burners. H-P Products, Louisville, Ohio.

Economy—Adjustable Buffing Hoods. Kirk & Blum Mfg. Co., Cincinnati, Ohio.

Economy—Ventilators. Arex Company, Chicago, Ill.

Economy—Squaring Shears. Acme Equipment Co., Inc., Chicago, Ill.

Economy—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.

Edgeseal—Filters. Wilson & Co., Inc., Chicago, Ill.

Effico—Ventilators, Hirschman-Pohle Co., LeRoy, N. Y.

Effico Louver—Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

EFM—Burners, Furnaces, and Stokers. Electric Furnace-Man, Inc., Emmaus, Pa.

Eiermann—Roofers' Tools. Efsco Products Co., Syracuse, N.Y.

Elastic—Roof Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.

Elastikote—Paint. Tropical Paint & Oil Co., Cleveland, Ohio.

Elasto-Rib—Vibration Isolating Pads. Korfund Co., Inc., Long Island City, N. Y.

El Capitan—Water Heaters. Southwestern Heater Corp., Dallas, Texas

Elcon—Stationary Louvers. Elgo Shutter & Mfg. Co., Detroit, Mich.

Electreat—Furnaces. Northwest Heating, Inc., Portland, Oreg.

Electric Aire—Furnaces. Gray & Dudley Co., Nashville, Tenn.

Electric City—Gutter Forming Machines. F. L. Robertson, Buffalo, N. Y.

Electric Janitor—Draft Damper Motors, Hand Fired Control Systems. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Electrimatic—Solenoid Valves. Jas. P. Marsh Corp., Skokie, Ill.

Electro-Cell—Filters. American Air Filter Co., Inc., Louisville, Ky.

Electro-Flux-Stik—Soldering Flux. Lake Chemical Co., Chicago, Ill.

Electro Hot—Water Heaters. Red Spot Electric Co., Tacoma, Wash.

Electro-Matic—Filters. American Air Filter Co., Inc., Louisville, Ky.

Electro-Mist—Oil Mist and Smoke Collector. American Air Filter Co., Inc., Louisville, Ky.

Electro-PL—Filters. American Air Filter Co., Louisville, Ky.
Electro-Sheet—Roofing. American Brass Co., Waterbury, Conn.
Electro-Valve—Solenoid Valves. Sciaky Bros., Inc., Chicago, Ill.
Electro-Wind—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.
Electroflo—Solenoid Valves. Hays Mfg. Co., Erie, Pa.
Electrolaire—Air Conditioning Furnaces. Electrol Burner Mfg. Co., Rutherford, N. J.
Electromaze—Electrostatic Filters. Air-Maze Corp., Cleveland, Ohio.
Electrunite—Tubing. Steel & Tubes Div., Republic Steel Corp., Cleveland, Ohio.
Elgin—Louvers and Shutters. Elgo Shutter & Mfg. Co., Detroit, Mich.
Elgin—Pneumatic Hammers, Brazing Torches and Welders. Borm Mfg. Co., Elgin, Ill.
Elite—Gravity Registers. Auer Register Co., Cleveland, Ohio.
EM—Motors. Electric Machinery Mfg. Co., Minneapolis, Minn.
EMC—Motors. Electric Motor Corp., Racine, Wis.
Empire—Mallets. Greene, Tweed & Co., North Wales, Pa.
Empire—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
Enamelclad—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.
Enduro—Stainless Steel Sheets. Republic Steel Corp., Cleveland, Ohio.
Epco—Perforated Metals. Erdle Perforating Co., Rochester, N. Y.
EPCO—Welding Timer. Electronic Products Co., Geneva, Ill.
Era—Furnaces. Excelsior Steel Furnace Co., Chicago, Ill.
Era Exl-Air—Furnaces. Excelsior Steel Furnace Co., Chicago, Ill.
Eroduct—Insulation. Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Esco—Smoke Pipe Dampers. Eselgroth & Co., Newark, N. J.
Esico—Electric Soldering Coppers. Electric Solding Iron Co., Inc., Deep River, Conn.
Esso—Furnaces, Oil Burners. Gilbert & Barker Mfg. Co., West Springfield, Mass.
Eternit—Non-Metallic Sheets. Ruberoid Co., New York, N. Y.
Eternium—Paint. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
Eutec Arc—Arc Welders. Eutetic Welding Alloys Corp., Flushing, N. Y.
EutecRods—Welding Rods. Eutectic Welding Alloys Corp., Flushing, N. Y.
Eutec Torch—Torches. Eutectic Welding Alloys Corp., Flushing, N. Y.
Eutector—Flux. Eutectic Welding Alloys Corp., Flushing, N. Y.
EutecTrodes—Electrodes. Eutectic Welding Alloys Corp., Flushing, N. Y.
Eveco—Barometric Draft Controls. Empire Ventilation Equipment Co., Long Island City, N. Y.
Even-Temp—Furnaces. Northwest Metal Products, Inc., Seattle, Wash.
Everdur—Plates, Sheets, Welding Rod. American Brass Co., Waterbury, Conn.
Everedy—Oil Burners. Mt. Hawley Mfg. Co., Peoria, Ill.
Everjet—Roofing Paint. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
Everlasting—Fastenings. H. M. Harper Co., Morton Grove, Ill.
Everplastic—Paint. H. H. Robertson Co., Pittsburgh, Pa.
Ex-Lite—Tin Plate Steel Sheets. Republic Steel Corp., Cleveland, Ohio.
Exidust—Dust Collectors. Allen Billmyre Div., Lamson Corp., Syracuse, N. Y.
E-Z—Soot Remover. Healy-Ruff Co., St. Paul, Minn.
E-Z—Power Hack Saws. Merchandising and Mfg. Associates, Inc., Lancaster, Pa.
E-Z Arc—Arc Welders. Will-Weld Mfg. Co., Omaha, Nebr.
E-Z Dux—Fiberglas Duct Connections. St. Clair Rubber Co., Marysville, Mich.
E-Z-Hung—Eaves Trough and Gutters. Riggin Metal Products, Inc., Lansing, Mich.
E-Z-On—Damper Clips and Tips, Damper Regulators. M. A. Gerett Corp., Milwaukee, Wis.
EZ Wash—Air Filters. Continental Air Filters, Inc., Louisville, Ky.

F

F Electric—Fan Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Fabricote—Waterproofing. Wasco Flashing Co., Cambridge, Mass.
Fabrikated—Faces, Grilles, Registers. Independent Register Co., Cleveland, Ohio.
Faceweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
Fairweather—Blower-Washer Units. Furblo Co., Hermansville, Mich.
Falco—Sheets. Fairmont Aluminum Co., Fairmont, W. Va.
Fan-Air—Gas Burners. Mettler Co., Inc., The, Los Angeles, Calif.
Fan-Pac—Night Air Cooling Fans. De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Far-Air—Evaporative Coolers, Filters. Farr Co., Los Angeles, Calif.
Farco—Soldering Flux. Farrelloy Co., Inc., Philadelphia, Pa.
Fargail—Soldering Flux. Farrelloy Co., Philadelphia, Pa.
Farsol—Soldering Flux. Farrelloy Co., Inc., Philadelphia, Pa.
F & E—Underfeed Stokers. Flynn & Emrich Co., Baltimore, Md.
Featherfin—Coils. L. J. Wing Mfg. Co., Linden, N. J.
Federal—Refractories. U. S. Stoneware Co., New York, N.Y.
Feltex—Roofing Felt. Philip Carey Co., Cincinnati, Ohio.
Fenestra—Heat Insulating Windows. Detroit Steel Products Co., Detroit, Mich.
Fenn's Rotary—Roof Ventilators. Waverly Heating Supply Co., Boston, Mass.
Ferro—Soldering Flux. Linde Air Products Co., New York, N. Y.
Ferro-Therm—Reflective Insulation. American Flange & Mfg. Co., Inc., New York, N. Y.
Ferrobord—Steel Roofing. Truscon Steel Co., Youngstown, Ohio.
Ferroweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
Fibercote—Roofing Paint. Midland Paint & Varnish Co., Cleveland, Ohio.
Fiberglas—Insulation. Owens-Corning Fiberglas Corp., Toledo, Ohio.
Fiberkote—Roofing Cement. National Mfg. Corp., Tonawanda, N. Y.
Fiberlite—Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.
Fiberock—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.
Fiber Self Seal—Air Filters. Research Products Corp., Madison, Wis.
Fibre Coating—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.
Fibre Sheets—Non-Metallic Sheets. Continental-Diamond Fibre Co., Newark, Del.
Fibron—Plastic Tubing. Irvington Varnish & Insulator Co., Irvington, N. J.
Fibronized—Plastic Tubing. Irvington Varnish & Insulator Co., Irvington, N. J.
Fil-thru—Oil Tank Gauge. Applied Mechanics Co., Boston, Mass.
Filtered Aire—Blower-Filters. American Foundry & Furnace Co., Bloomington, Ill.
Filterpure—Coils. Betz Corp., Hammond, Ind.
Fin-Flex—Directional Flow Registers. Auer Register Co., Cleveland, Ohio.
Findlay—Stokers. Central Rubber & Steel Corp., Findlay, Ohio.
Finntense—Conversion Gas Burner. Jerry Finn Engineers, St. Paul, Minn.
Fire Ball—Gas Burners. Johnson Gas Appliance Co., Cedar Rapids, Iowa.
Fire Boy—Conversion Burners. Moore Equipment Co., Lincoln, Nebr.
Fire Chief—Oil Burners. Coal-O-Matic Co., Trucksville, Pa.
Fire-Crest—Conversion Burners. Modern Controls Corp., Centerline, Mich.
Fire-Guard—Stokers. Eddy Stoker Corp., Chicago, Ill.
Fire-Hearth—Castable Refractories. Fireline Stove & Furnace Lining Co., Chicago, Ill.
Fire-Swirl—Baffles. Zeh Co., Inc., Passaic, N. J.
Firebox—Combustion Chambers. Sid Harvey, Inc., Valley Stream, N. Y.
Firecrete—Refractories. Johns-Manville, New York, N. Y.
Fireite—Cement. Johns-Manville, New York, N. Y.
Fireline—Furnace Firepot Lining. Fireline Stove & Furnace Lining Co., Chicago, Ill.
Firelite—Refractories. Fireline Stove & Furnace Lining Co., Chicago, Ill.
Fireye—Controls. Combustion Control Corp., Cambridge, Mass.
Firma—Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Firomatic—Fuel Oil Filters, Oil Burner Fittings, Tank Gauges. Morse-Smith-Morse, Inc., Watertown, Mass.
Fiske—Oil Burners. National Fuel Conservation Co., Inc., White Plains, N. Y.
Fitrite—Conductor, Eaves Trough and Gutter Fittings and Accessories, Skylight Lifts, Snow Guards. David Levow, or Rival Strap Corp., New York, N. Y.
Fixit—Roof Cement. National Mfg. Corp., Tonawanda, N. Y.
Flame Control—Oil Burners. Richfield Mfg. Corp., New Rochelle, N. Y.
Flame-Otrol—Controls. Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.
Flash-Off No. 99—Industrial Finish. Acme White Lead & Color Works, Detroit, Mich.
Flash-Rite—Flashing. Figge Co., Chicago, Ill.
Flat-Top—Sheet Metal Roofing. Newport Steel Corp., Newport, Ky.
Flatjet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.
Flatpak—Prefabricated Ducts and Fittings. Viking Mfg. Corp., Cleveland, Ohio.
Fleetweld—Arc Welding Electrodes, Lincoln Electric Co., Cleveland, Ohio.
Fleetwelder—Arc Welders. Lincoln Electric Co., Cleveland, Ohio.

Fleur de Lis—Conductor Heads and Fittings. Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.

Flex-Tube—Draft Gauges. F. W. Dwyer Mfg. Co., Chicago, Ill.

Flexarc—Arc Welders. Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Flexaust—Hose. American Ventilating Hose Co., New York, N. Y.

Flexi-Duct—Duct Connections. Grant Wilson, Inc., Chicago, Ill.

Flexiblac—Paint. Samuel Cabot, Inc., Boston, Mass.

Flextop—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.

Flo-Co—Furnaces and Gas and Oil Burners. Floral City Heater Co., Monroe, Mich.

Flo-Warm—Gas Burners, Furnaces. Williamson Heater Co., Cincinnati, Ohio.

Floor-O-Lator—Furnaces. Northwest Metal Products, Inc., Seattle, Wash.

Flo-Par—Water Heaters. Southwestern Heater Corp., Dallas, Texas

FloRite—Air Velocity Meters. Bacharach Industrial Instrument Co., Pittsburgh, Pa.

Florite Desiccant—Dehumidifier. Floridin Co., Warren, Pa.

Flosol—Soldering Flux. American Chemical Paint Co., Ambler, Pa.

Flowing Heat—Furnaces. Sam Daniels Mfg. Co., Inc., Hardwick, Vt.

Flualyzer—Portable CO_2 Analyzer. Chas. Englehard, Inc., East Newark, N. J.

Flureseal—Waterproofing. American Fluresit Co., Cincinnati, Ohio.

Flux-Stik—Soldering Flux. Lake Chemical Co., Chicago, Ill.

Fluxrite—Flux. National Lead Co., New York, N. Y.

Foamglas—Insulation. Pittsburgh Plate Glass Co., and Pittsburgh Corning Corp., Pittsburgh, Pa.

Follansbee Forge—Furnace & Smoke Pipe, Fittings & Accessories. Sheet Metal Specialty Div., Follansbee Steel Corp., Pittsburgh, Pa.

Fontoheat—Floor Furnaces. Sunshine Mantle Co., Chanute, Kans.

Forbes Syphonaire—Ventilators. Western Engineering & Mfg. Co., Venice, Calif.

Forster—Gas Burners. Ransome Co., Emeryville, Calif.

Fosco Standard—Water Heaters. F. O. Schoedinger, Columbus, Ohio.

Fosco Thermoray—Gas Space Heaters. F. O. Schoedinger, Columbus, Ohio.

4-Way-Flow—Registers. U. S. Register Co., Battle Creek, Mich.

Fracto-Crete—Castable Refractories. Ramtite Co., Chicago, Ill.

Free Exhaust—Roof Ventilators. Burt Mfg. Co., Akron, Ohio

Free Flow—Roof Ventilators. Burt Mfg. Co., Akron, Ohio

Freeman—Stokers. Illinois Iron & Bolt Co., Chicago, Ill.

Fresh-Air Maker—Fans. Schwitzer-Cummins Co., Indianapolis, Ind.

Frig-A-Fire—Air Conditioning Units. Automatic Firing Corp., St. Louis, Mo.

Frigid—Fans, Blowers, Housings. Circulators & Devices Mfg. Corp., New York, N. Y.

Frigitower—Cooling Towers. Thermal Industries, Indio, Calif.

Fuel-Saver—Automatic Draft Regulator. Walker Mfg. & Sales Corp., St. Joseph, Mo.

Fuel-Tone—Oil Burner Tank Solvent. Radiator Specialty Co., Charlotte, N. C.

Fuelatrol—Oil Burners, Furnaces and Stokers. Premium Coal & Oil Co., Cincinnati, Ohio.

Fueltone—Oil Tank Solvent. Ampion Corp., Long Island City, N. Y.

Fulljet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.

Fulscope—Control Systems. Taylor Instrument Co., Rochester, N. Y.

Furnacestat—Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Fuseair—Diffusers. Aladdin Heating Corp., Oakland, Calif.

Fyr-Feeder—Stokers. American Coal Burner Co., Chicago, Ill.

Fyr-Fly—Oil Burners. Breeze Corps., Inc., Newark, N. J.

Fyre-Mortar—Insulating Cement. Quigley Co., Inc., New York, N. Y.

Fyrite—CO_2 Analyzers. Bacharach Industrial Instrument Co., Pittsburgh, Pa.

G

G-6—Paint Spray Guns. Eclipse Air Brush Co., Newark, N.J.

Galbestos—Roofing. H. H. Robertson Co., Pittsburgh, Pa.

Galongage—Oil Tank Gauge. Applied Mechanics Co., Boston, Mass.

Galv-Kote—Zinc Paint. Geo. H. Ohmer Co., Dayton, Ohio.

Galv-O-Zinc—Coating, Paint. Blue Ridge Talc Co., Inc., Henry, Va.

Galva-Flux—Soldering Flux. London Chemical Co., Chicago, Ill.

Galvaprep—Rust Preventive Chemicals. Neilson Chemical Co., Detroit, Mich.

Gar Wood—Furnaces. Enico Products, Detroit, Mich.

Gas-a-Fire—Gas Conversion Burners, Gas Furnaces. Automatic Firing Corporation, St. Louis, Mo.

Gasaver—Gas Burners. Williamson Heater Co., Cincinnati, Ohio

Gas Economy—Furnaces. International Heater Co., Utica, N. Y.

Gas Mizer—Furnaces. Floral City Heater Co., Monroe, Mich.

Gas-O-Matic—Gas Burners & Furnaces. Williams Oil-O-Matic Div., Eureka-Williams Corp., Bloomington, Ill.

Gasmaster—Conversion Burners and Furnaces. Twin City Gas Specialty Co., Minneapolis, Minn.

Gasweld—Soldering Coppers and Torches, Soldering Flux, Welding Rods. Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.

GAT—Paint Spray Guns. Eclipse Air Brush Co., Newark, N.J.

G. B. C.—Blowers and Fans. General Blower Co., Inc., Philadelphia, Pa.

G/C—Controls. General Controls Co., Glendale, Calif.

G-E—Air Conditioning Units, Oil Burners, Heating and Cooling Coils, Compressors, Air Conditioning Furnaces. General Electric Co., Bloomfield, N. J.

G-E—Controls, Soldering Coppers, Welding Electrodes, Motors, Transformers, Welders. General Electric Co., Schenectady, N. Y.

G-E—Germicidal Lamps. General Electric Co., Cleveland, Ohio.

Gearmotor—Electric Motors. Philadelphia Gear Works, Inc., Philadelphia, Pa.

Gehl—Stokers. Eddy Stoker Corp., Chicago, Ill.

Gemaco—Compressors. General Machinery Co., Spokane, Wash.

Gemware—Hygrometers. Psychrometers, Thermometers. G. M. Mfg. Co., New York, N. Y.

General—Heaters. Agricola Furnace Co., Inc., Gadsden, Ala.

General—Water Heaters. Republic Products Co., Philadelphia, Pa.

Genoco—Furnaces, Water Heaters, Oil Burners. General Oil Heating Corp., West New York, N. J.

Germicidal—Sterilizing Lamp. General Electric Co., Cleveland, Ohio.

Giant—Oil Burners. Breeze Corps., Inc., Newark, N. J.

Gibraltar—Furnaces and Heaters. Ma-Girl Foundry & Furnace Co., Bloomington, Ill.

Gil Governoret—Gas Pressure Regulating Valves. Gas & Oil Industry Laboratories, Inc., Irvington, N. J.

Gilbarco—Furnaces, Oil & Gas Burners. Gilbert & Barker Mfg. Co., West Springfield, Mass.

Gilbert—Combustion Chambers. R. Rehm, St. Albans, N. Y.

Gilco—Water Heaters. J. L. Gillen Co., Dowagiac, Mich.

Gil Nohum—Valves. Gas & Oil Industry Laboratories, Inc., Irvington, N. J.

Gilsalume—Paint. United Gilsonite Laboratories, Scranton, Pa.

Gilt Edge—Furnaces, Stokers. Schwab Furnace Co., Milwaukee, Wis.

Gipsy—Circulating Gas Heaters. Independence Stove & Mfg. Co., Independence, Mo.

Gladiator—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.

Glasfab—Roofing Felt. Lexington Supply Co., Cleveland, Ohio.

Glasfab—Roofing Felt. Owens-Corning Fiberglas Corp., Toledo, Ohio.

Glazola—Caulking Compounds. Nebel Mfg. Co., Cleveland, Ohio.

Globe Sizzler—Hot Water Coils. Globe Machinery & Supply Co., Des Moines, Iowa.

Glo-Cone—Gas Burners. Geisel Mfg., Inc., Elyria, Ohio

Glo-Fyr—Oil Burners. Breeze Corps., Inc., Newark, N. J.

Glo-Ring—Gas Burners. Lennox Furnace Co., Marshalltown, Iowa.

Glowan—Gas Burners. J. O. Martin Co., Inc., San Francisco, Calif.

Gnome—Oil Burners. Breeze Corps., Inc., Newark, N. J.

Go-Eze—Damper Regulators. Severson Mfg. & Supply Co., Milwaukee, Wis.

Gohi—Conductor Pipe, Gutters, Fittings and Accessories, Sheet Metal Roofing. Newport Steel Corp., Newport, Ky.

Gold Bond—Insulation. National Gypsum Co., Buffalo, N. Y.

Gold Bond-Gimco—Rock Wool Products, Insulating Cement. National Gypsum Co., Buffalo, N. Y.

Gordon Spreader-Flame—Gas and Gas-Oil Burners and Furnaces. Roberts-Gordon Appliance Corp., Buffalo, N. Y.

G-R—Welders. Glenn-Roberts Co., Oakland, Calif.

Gradutrol—Pneumatic Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Grand Rapids—Furnace Cleaner. Doyle Vacuum Cleaner Co., Grand Rapids, Mich.

Granodine—Coating Process. American Chemical Paint Co., Ambler, Pa.

Graylite—Building and Duct Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.

Greasgo—Metal Cleaners, Polishers and Finishers. Ampion Corp., Long Island City, N.Y.

Greastop—Filters. Air-Maze Corp., Cleveland, Ohio.

Grid—Heating and Cooling Coils. D. J. Murray Mfg. Co., Wausau, Wis.

Grillometer—Direct Reading Air Velocity Meter. Detroit Air Conditioning Service Co., Inc., Nashville, Mich.

GS—Hygrometers, Psychrometers, Brazing Torches, Soldering Torches. General Scientific Equipment Co., Philadelphia, Pa.

H

Hacker—Blowers, Furnaces. Standard Heating Equipment Co., Waterloo, Iowa.
Hair Glass—Filters. H. J. Somers, Inc., Detroit, Mich.
Halco—Furnaces. Hall-Neal Furnace Co., Indianapolis, Ind.
Halcoloid—Roof Cement. Hallemite Mfg. Co., Cleveland, Ohio
Hallmark—Furnaces. Heating Specialties Co., Baltimore, Md.
Hammerkraft—Paint. Hilo Varnish Corp., Everett, Mass.
Hammer-Sets—Expansion Bolts. Rawlplug Co., Inc., New York, N. Y.
Handi-Heat—Soldering Furnaces, Torches. Met Sales & Mfg. Co., Rockford, Ill.
Handlead—Lead Roofing Sheets. National Lead Co., New York, N. Y.
Handnib—Punches. National Machine Tool Co., Racine, Wis.
Handy—Pipe, Prefabricated Ducts, Fittings. F. Meyer & Bro. Co., Peoria, Ill.
Handy-Flux—Soldering Flux. Handy & Harman, New York, N. Y.
Happy Thought—Heaters. Pittston Stove Co., Pittston, Pa.
Hardlead—Lead Roofing. National Lead Co., New York, N. Y.
Hardweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
Hartford-Lincoln—Shear. Lincoln Machine Co., Boston, Mass.
Haylo—Heaters. Frank D. Davison, Inc., Los Angeles, Calif.
H-B—Gas Conversion Burner. Handley Brown Heater Co., Jackson, Mich.
H&C—Furnace Chain, Damper Clips, Dampers, Ceiling Ventilators, and Registers and Grilles. Hart & Cooley Mfg. Co., Holland, Mich.
Hearth-Glo—Space Heaters. Jackes-Evans Mfg. Co., St. Louis, Mo.
Hearth Crete—Refractories. Quigley Co., Inc., New York, N. Y.
Heat-Aid—Furnace Linings. Pyrolite Products Co., Cleveland, Ohio.
Heat Holder—Baffles. Sid Harvey, Inc., Valley Stream, N. Y.
Heat-Lock—Barometric Dampers. National Fuel Conservation Co., Inc., White Plains, N. Y.
Heat-O-Meter—Time Switch Heat Controls. Miller-Harris Instrument Co., Milwaukee, Wis.
Heat-Pak—Oil Burners. Breeze Corps., Inc., Newark, N. J.
Heat-Pak—Oil Burners, Water Heaters. Aldrich Co., Wyoming, Ill.
Heat Reclaimer—Heat Savers. C. L. Rayfield Co., Chicago, Ill.
Heat-Rem—Aluminum Paint. Speco, Inc., Cleveland, Ohio.
Heat-Rite—Gravity Registers. Auer Register Co., Cleveland, Ohio.
Heat Seal—Insulation. Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Heatrola—Heaters. RCA-Estate Appliance Corp., Subsidiary of Radio Corporation of America, Hamilton, Ohio.
Heatwave—Floor and Wall Furnaces. Southwest Mfg. Co., Aurora, Mo.
Heatwell—Gas Burners. Maxwell Inc., Denver, Colo.
Heavyduty—Duct Damper Regulators. Parker-Kalon Corp., New York, N. Y.
Heet-Master—Kettles. Aeroil Products Co., Inc., South Hackensack, N. J.
Hellite—Refractories. Johns-Manville, New York, N. Y.
Helyx—Drive Screws, Nails. Hillwood Mfg. Co., Cleveland, Ohio.
Herco—Welders, Transformers. Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Heresite—Pipe and Fittings. Heremetal Co., Minneapolis, Minn.
Hermetic—Furnaces. Favorite Mfg. Co., Piqua, Ohio.
Hevikote—Welding Electrodes. Universal Welding Corp., Cleveland, Ohio.
Hevy-Duty—Combustion Chambers. Insulation & Refractories Co., Williamson, N. Y.
Hi-Degree—Paint. Cheesman-Elliot Co., Inc., Brooklyn, N. Y.
Hi-Duty—Copper Tube Fittings. Imperial Brass Mfg. Co., Chicago, Ill.
Hi-Duty—Combustion Chambers. Monogram Products Co., Philadelphia, Pa.
Hi Heat—Gas Burners. Hansen Gas & Electric Co., San Francisco, Calif.
Hi-Power—Buffers, Grinders, Drills. Portable Electric Tools, Inc., Chicago, Ill.
Hi-Speed—Electric Dimpler. York Electric Tool Co., York, Pa.
Hi-Speed—Nibblers, Slitters, Shears. Libert Machine Co., Green Bay, Wis.
Hi-Speed—Welding and Cutting Apparatus. Dockson Corp., Detroit, Mich.
Hi-Spra—Spray Nozzles. Thermal Industries, Indio, Calif.
Hi-Steel—Alloy Steel. Inland Steel Co., Chicago, Ill.
Hicycle—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.
High-Duty—Humidifier Valves. Maid-O'-Mist, Inc., Chicago, Ill.
High-Ten-No. 500—Flux. Industrial Service Laboratories, Milwaukee, Wis.
Hilume—Aluminum Paint. Hilo Varnish Corp., Everett, Mass.
H&K—Perforated Metals. Harrington & King Perforating Co., Chicago, Ill.
H-M—Gas Pressure Regulating Valves. Thermac Co., Los Angeles, Calif.
H&M—Gas Burners. Hook & Miller, Pittsburgh, Pa.
Hoffman—Storage Water Heaters. Clayton & Lambert Mfg. Co., Louisville, Ky.
Hold Heat—Soldering Coppers. Turner Brass Works, Sycamore, Ill.
Hol-grip—Electrode Holders. Tweco Products Co., Wichita, Kans.
Holgun—Portable Electric Drills. Black & Decker Mfg. Co., Towson, Md.
Holliday—Evaporative Coolers. Comfort Products Corp., Dallas, Texas.
Holly Glen—Water Heaters. Hollywood Water Heater Co., Los Angeles, Calif.
Holtite—Screws. Continental Screw Co., New Bedford, Mass.
Home—Oil Burners. Sid Harvey, Inc., Valley Stream, N. Y.
Honeycomb—Air Filters. Wilson & Co., Inc., Chicago, Ill.
Horn-O-Tone—Paint. A. C. Horn Co., Inc., Long Island City, N. Y.
Horneblende—Metal Protecting Paint and Roofing Cement. North American Fibre Products Co., Cleveland, Ohio.
Hornlume—Roofing Paint. A. C. Horn Co., Long Island City, N. Y.
Hot Blast—Furnaces and Heaters. Cole Hot Blast Mfg. Co., Chicago, Ill.
Hot Blast—Furnace Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.
Hot Boy—Space Heaters. Coroaire Heater Corp., Cleveland, Ohio.
Hot Spot—Electric Welders. Acme Electric Welder Co., Los Angeles, Calif.
Hotco—Furnaces, Oil Burners. Hotentot Co., Inc., Omaha, Nebr.
Houston—Gas Heaters. Houston Blow Pipe & Sheet Metal Works, Houston, Texas.
Howell—Oil Burners. Kol-Master Corp., Oregon, Ill.
Huber—Overfeed Stokers. Flynn & Emrich Co., Baltimore, Md.
Humiclean—Cleaning Compound. Carolina Aniline & Extract Co., Charlotte, N. C.
Humid-Aire—Humidifiers. Meyer Furnace Co., Peoria, Ill.
Humid-u-stat—Humidistat. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Humidair—Humidifiers. Skilbeck Mfg. Co., Kenosha, Wis.
Humidair—Washers. American Foundry & Furnace Co., Bloomington, Ill.
Humidigraph—Hygrometers. Bristol Co., Waterbury, Conn.
Humidiguide—Humidistats. Taylor Instrument Cos., Rochester, N. Y.
Humidomist—Nozzles. Supreme Elec. Products Corp., Rochester, N. Y.
Humidostat—Humidistats. Johnson Service Co., Milwaukee, Wis.
Hum-O-Zone—Spray Humidifiers. Daffin Mfg. Co., Lancaster, Pa.
Humphrey—Furnaces and Heaters. General Gas Light Co., Kalamazoo, Mich.
Husky-Lite—Combination Machines. Maplewood Machinery Co., Chicago, Ill.
Hydramotor—Gas Pressure Regulating Valves. General Controls Co., Glendale, Calif.
Hydraulic-Action—Controls. White-Rodgers Electric Co., St. Louis, Mo.
Hydro-Temp—Cooling Towers. Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.
Hydro-Whirl—Dust Collectors. Peters-Dalton, Inc., Detroit, Mich.
Hydrocide—Waterproofing. L. Sonneborn Sons., Inc., New York, N. Y.
Hydronon—Waterproofing. Barret Div., Allied Chemical & Dye Corp., New York, N. Y.
Hy-Duty—Blowers, Blower Wheels. Schwitzer-Cummins Co., Indianapolis, Ind.
Hy-Power—Snips and Shears. Wiss & Sons Co., J., Newark, N. J.
Hy-Speed—Hydraulic Tools. Munton Mfg. Co., Franklin Park, Ill.
Hyduty—Ventilators. Davidson Fan Co., Newton, Mass.
Hyspar—Cements, Caulking Compounds, Roof Paints. Midland Paint & Varnish Co., Cleveland, Ohio.
Hytempite—Furnace Cement. Quigley Co., Inc., New York, N. Y.

I

Ideal—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.
Ideal—Oil Burner Fittings. Boston Machine Works Co., Lynn, Mass.
Ideal—Pipe and Fittings. Riggin Metal Products, Inc., Kankakee, Ill.
Ideal—Roofing Nails. Tennessee Coal and Iron Div., U. S. Steel Corp., Fairfield, Ala.
Ideal—Duct Insulation. Hinde & Dauch Paper Co., Sandusky, Ohio.
Ideal-Aire—Air Conditioning Units. American Ideal-Aire Corp., Mineola, N. Y.
IEC—Relays, Switches. Industrial Engineering Corp., Terre Haute, Ind.
Ilgette—Kitchen Exhaust Fans. Ilg Electric Ventilating Co., Chicago, Ill.

Illbronze—Aluminum Paste and Powder. Illinois Bronze Powder Co., Inc., Chicago, Ill.
Immersatherm—Domestic Hot Water Control. Mercoid Corp., Chicago, Ill.
Impact—Spray Nozzles. Phillips Cooling Tower Co., Inc., Brooklyn, N. Y.
Imperial—Evaporative Coolers. International Metal Products Co., Phoenix, Ariz.
Imperial—Pillow Blocks. Anti-Friction Bearings Co., Los Angeles, Calif.
In-Quik—Combustion Chambers. Insulation & Refractories Co., Williamson, N. Y.
Incinor—Incinerators. Bowser, Inc., Incineration Div., Cairo, Ill.
Inco—Paints, Sound Deadener. Inter-Coastal Paint Co., East St. Louis, Ill.
Inco—Ventilators. Iona Ventilator Co., Inc., Philadelphia, Pa.
Inconel—Alloy Plates, Sheets, Tubing, Electrodes. International Nickel Co., Inc., New York, N. Y.
Independent—Furnaces, Heaters. Independence Stove & Mfg. Co., Independence, Mo.
Indian—Furnaces. Dowagiac Steel Furnace Co,, Dowagiac, Mich.
Indoor-Outdoor—Thermostats. White-Rodgers Electric Co., St. Louis, Mo.
Industrial Air—Fans, Louvers & Ventilators. Bertram Co., Harvey P., Cincinnati, Ohio.
IngAclad—Plates and Sheets. Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
Ingels—Elbow Machines. Maplewood Machinery Co., Chicago, Ill.
Inkstop—Filters. Air-Maze Corp., Cleveland, Ohio.
Ins-Lite—Building and Duct Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.
Insa-Lute—Insulating Cement. Sauereisen Cements Co., Pittsburgh, Pa.
Instant-Glo—Combustion Chambers. Boston Machine Works Co., Lynn, Mass.
Insulag—Insulation and Insulating Cement. Quigley Co., Inc., New York, N. Y.
Insulate-Windows—Heat Insulating Windows. Chamberlin Company of America, Detroit, Mich.
Insulfil—Insulation. Refractory & Insulation Corp., New York, N. Y.
Insulmastic—Waterproofing. Armstrong Cork Co., Lancaster, Pa.
Insulmat—Insulation. J. W. Mortell Co., Kankakee, Ill.
Inter-Matic—Time Switches. International Register Co., Chicago, Ill.
International—Oil Tank Gauge. Applied Mechanics Co., Boston, Mass.
Ironhide—Paint. Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Ironset—Furnace Cement. Fireline Stove & Furnace Lining Co., Chicago, Ill.
Ironweld—Cast Iron Welding Flux. Sight Feed Generator Co., West Alexandria, Ohio.
Irpo—Rust-Proofing. Wolfe-Kote Co., Sheboygan, Wis.
Isle City—Registers. Rock Island Register Co., Rock Island, Ill.
Isomode—Vibration Pads. MB Mfg. Co., Inc., New Haven, Conn.
IVCO—Ventilators. Iona Ventilator Co., Inc., Philadelphia, Pa.

J

Jackson—Soldering Coppers. Vulcan Electric Co., Danvers, Mass.
Janette—Blower Wheels and Housings. Jan-Air, Inc., Richmond, Ill.
Janitrol—Gas Burners, Air Conditioning Units, Furnaces. Surface Combustion Corp., Toledo, Ohio.
J & C—Blower-Filter Units and Furnaces. Jackson & Church Co., Saginaw, Mich.
Ject-O-Valve—Ventilators. Swartwout Co., Cleveland, Ohio.
Jenn Air Exhausters—Blowers and Fans. Filkins, Inc., Edward, Chicago, Ill.
JFS—Transmissions. Stephens-Adamson Mfg. Co., Aurora, Ill.
J. & H.—Electric Motors. Jack & Heintz, Inc., Cleveland, Ohio
Jiffy—Duct Damper Regulators. Parker-Kalon Corp., New York, N. Y.
Jiffy—Roof Flashing. Simplex Mfg. Co., Fond du Lac, Wis.
JK—Bar Benders. James Knights Co., Sandwich, Ill.
J-M—Insulation, Roofing. Johns-Manville, New York, N. Y.
Jointite—Insulation. Mundet Cork Corp., North Bergen, N. J.
Jumbo—Oil Burners. Breeze Corps., Inc., Newark, N. J.
June-Aire—Furnaces. American Foundry & Furnace Co., Bloomington, Ill.
Junior—Water Heaters. SuperbO Mfg. Co., Los Angeles, Calif.
JusRite—Ducts, Dampers, Duct Connectors, Pipe and Fittings. Corbman Bros., Inc., Philadelphia, Pa.
JusRite L-Bo—Furnace Pipe and Fittings. Corbman Bros., Inc., Philadelphia, Pa.

K

Kant Krush—Roof Strainers. Grand Rapids Wire Products Co., Grand Rapids, Mich.
Kapco—Asphalt Board. Keystone Asphalt Products Co., Chicago, Ill.
Kasson—Motors. General Die & Stamping Co., New York, N. Y.
Kastite—Castable Refractory. Chicago Fire Brick Co., Chicago, Ill.
Kathabar—Air Conditioning Units. Dehumidifiers. Surface Combustion Corp., Toledo, Ohio.
Kaukit—Caulking Compound. L. Sonneborn Sons, Inc., New York, N. Y.
K-B—Damper Clips and Tips, Regulator Sets. G. L. Kerentoff, Cincinnati, Ohio.
Keldur—Vibration Isolators. Hobsite Products Co., Harrison, N. J.
Ken—Combustion Chamber, Baffles, Oil Burner Fittings and Accessories, Fuel Oil Tank Gauges. Robert Barclay Co., Chicago, Ill.
Kenwood—Furnaces. American-Standard Corp., Pittsburgh, Pa.
Keystone—Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
Kimsul—Insulation. Kimblery-Clark Corp., Neenah, Wis.
King Gauge—Tank Gauge. Oil Equipment Mfg. Co., New Haven, Conn.
Kirksite—Plates. Monarch Alloys, Ravenna, Ohio.
Kirkson—Flux, Sheet Solder. Morris P. Kirk & Son, Los Angeles, Calif.
Kitch-N-Ventor—Fans. Universal Blower Co., Birmingham, Mich.
Kitchen-Aire—Kitchen Fans. Stewart Mfg. Co., Indianapolis, Ind.
Klee-Sealant—Caulking Compound American Fluresit Co., Cincinnati, Ohio.
Kleen-Aire—Furnaces. Steel City Furnace Co., Springdale, Pa.
Kleenflo—Filters. Air-Maze Corp. Cleveland, Ohio.
Kleenit—Oil Burner Tank Solvent. Red Wing Oil Burner Co., Inc., Medford, Mass.
Kleenmaster—Furnace Vacuum Cleaners. Molloy Sales Corp., Chicago, Ill.
Klenk's—Snips. W. H. Compton Shear Co., Newark, N. J.
Klixon—Controls, Thermostats. Spencer Thermostat Div., Metals & Controls Corp., Attleboro, Mass.
Klondike—Welders. Ralph Fern, Scranton, Pa.
Klosd—Motors. Sterling Electric Motors, Inc., Los Angeles, Calif.
K&M—Insulation. Keasbey & Mattison Co., Ambler, Pa.
Knock-Out—Arc Welders, Torches, Buffers, Grinders, Polishers and Sanders. K. O. Lee Co., Aberdeen, S. D.
Kno-Draft—High Velocity Air Diffusers. W. B. Connor Engineering Corp., Danbury, Conn.
KO—Hoists. Stephens-Adamson Mfg. Co., Aurora. Ill.
Kohler—Crimping Machine. Ingram Machinery Co., Picher, Okla.
Kokote—Wire. Continental Steel Corp., Kokomo, Ind.
Kolbcast—Combustion Chambers. Kolb Refractories Co., Philadelphia, Pa.
Kolbkast—Combustion Chambers. A. R. Webber Co., Inc., New Haven, Conn.
Kolorpins—Nails. Independent Nail & Packing Co., Bridgewater, Mass.
Kolstoker—Stokers. Anchor Stove & Range Co., New Albany, Ind.
Kompo-Kork—Vibration Isolating Pads. Korfund Co., Inc., Long Island City, N. Y.
Konductor—Fasteners. Friedley-Voshart Co. Chicago, Ill.
Konik—Sheets and Wire. Continental Steel Corp., Kokomo, Ind.
Kooler-Aire—Air Conditioning Units. U. S. Air Cond. Corp., Minneapolis, Minn.
Koolmaster—Fans. Air Equipment Co., Inc., Chicago, Ill.
Koolshade—Sun Reflecting Screens. Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
Koppax—Paint. Koppers Co., Inc., Pittsburgh, Pa.
Kopro-C.P.-15—Roof Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.
Krack—Air Conditioning Units, Coils. Refrigeration Appliances, Inc., Chicago, Ill.
Kres-Kno Perco-Flash—Water Heaters. Kresno-Stamm Co., New York, N. Y.
Krome-Kote—Metal Cleaners. Wolfe-Kote Co., Sheboygan, Wis.
Kruzite—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
KRW—Press Brake. K. R. Wilson, Buffalo, N. Y.
Kurlicue—Nails. Independent Nail & Packing Co., Bridgewater, Mass.
Kwik-Melter—Roofers' Kettles. Littleford Bros., Inc., Cincinnati, Ohio.
Kwik-Tite—Copper Tube Fittings. Imperial Brass Mfg. Co., Chicago, Ill.
Kwik-Way—Damper Regulators. Hart & Cooley Mfg. Co., Holland, Mich.
Kwikflo Flux—Soldering Flux. London Chemical Co., Chicago, Ill.
KX-99—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

L

L-Blow—Exhausters, Ventilators. Trade-Wind Motorfans, Inc., Los Angeles, Calif.
LA—Motors. Louis Allis Co., Milwaukee, Wis.
La-Co—Soldering Flux. Lake Chemical Co., Chicago, Ill.
Lacq—Lacquers. Glidden Company, Cleveland, Ohio.

Lactile—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.

Lamneck—Ducts and Duct Fittings, Pipe and Fittings. Clayton & Lambert Mfg. Co., Louisville, Ky.

Lancol—Stainless Steel Soldering Flux. F. H. Langsenkamp Co., Indianapolis, Ind.

Lapidensin—Waterproofing. American Fluresit Co., Cincinnati, Ohio

Larco—Asbestos Paper Paste. Western Mineral Products Co., Minneapolis, Minn.

Larkweld—Welders. Central Transformer Corp., Pine Bluff, Ark.

Lastile—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.

Latest—Skylight Lifts. Danzer Metal Works Co., Hagerstown, Md.

Lawson—Heaters. United States Stove Co., South Pittsburg, Tenn.

Lead-Head—Nails. W. H. Maze Co., Peru, Ill.

Lead-Seal—Roofing Nails. The Deniston Co., Chicago, Ill.

Leader—Burners, Furnaces. Berger Furnace Mfg. Co., Pittsburgh, Pa.

Leader—Water Heaters. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.

Leadtex—Lead-Coated Sheets. Revere Copper & Brass Inc., New York, N. Y.

Leafcoat—Protective Coated Sheets. Mid-America Steel Warehouses, Chicago, Ill.

Leak Lock—Leak Detectors. Highside Chemicals Co., Clifton, N. J.

Leastoker—Stokers. H. Leslie Leas Co., Monona, Iowa.

Lectro-Glo—Heaters. Day & Night Div. Affiliated Gas Eqiupment, Inc., Monrovia, Calif.

Lectrodryer—Dehumidifier. Pittsburgh Lectrodryer Corp., Pittsburgh, Pa.

Lehigh—Furnaces, Heaters. Pittston Stove Co., Pittston, Pa.

Leigh—Shutters, Ventilators. Air Control Products, Inc., Coopersville, Mich.

Leonard—Circulating Oil Heater. W. R. Ames Co., San Francisco, Calif.

Level-Temp—Thermostats. White-Rodgers Electric Co., St. Louis, Mo.

Levelizer—Gas Controls. L. J. Mueller Furnace Co., Milwaukee, Wis.

Levelometer—Oil Tank Gauges. Liquidometer Corp., Long Island City, N. Y.

Lexsuco—Roof Fastening Clips, Roofing Paint. Lexington Supply Co., Cleveland, Ohio.

Liberty—Water Heaters. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.

Liberty—Furnaces, Dowagiac Steel Furnace Co., Dowagiac, Mich.

Liberty—Caulking Compound, Roof Cement, Paint, Waterproofing. Carter Paint Co., Liberty, Ind.

Liberty—Ventilators. Penn Ventilator Co., Philadelphia, Pa.

Life-Line—Motors. Westinghouse Electric Corp., Pittsburgh, Pa.

Lifetime—Roofing, Sheets, Shingles, Conductor Pipe and Fittings, Rivets, Tubing. Reynolds Metals Co., Louisville, Ky.

Light Duty—V-Belts. B. F. Goodrich Co., Akron, Ohio.

Lightening—Hole Punches. Merchandising and Manufacturing Associates, Inc., Lancaster, Pa.

Lightweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.

Lincolnweld—Arc Welders, The Lincoln Electric Co., Cleveland, Ohio.

Lincwelder—Arc Welders. Lincoln Electric Co., Cleveland, Ohio.

Line-O-Flo—Diffusers, Ventilators. Barber-Colman Co., Rockford, Ill.

Liquidepth—Tank Gauge. Petrometer Corp., Long Island City, N. Y.

Lite-Cast—Combustion Chambers. Monogram Products Co., Philadelphia, Pa.

Lithoform—Coating Chemical for Galvanized, Zinc or Cadmium surfaces. American Chemical Paint Co., Ambler, Pa.

Little Blacksmith—Punches and Slitting Machines. J. F. Kidder Mfg. Co., Inc., Burlington, Vt.

Little Bobby—Brakes. A. R. Harris, Hammond, Ind.

Little Giant—Time Switches. Tork Clock Co., Inc., Mt. Vernon, N. Y.

Little Gem—Gas Burner. Columbia Burner Co., Toledo, Ohio.

Liv-Air—Air Conditioning Furnaces. Livingston, Inc., Marshall, Mich.

Lloyd's—Soldering Flux. Johnson Mfg. Co., Inc., Mount Vernon, Iowa.

L-M—Tubing. Lewin-Mathes Co., St. Louis, Mo.

L & N—Thermometers. Leeds & Northrup Co., Philadelphia, Pa.

Lo-Bill—Storage Water Heater. Autogas Co., Chicago, Ill.

Lo-Blast—Gas Burners. Mid-Continental Metal Products Co., Chicago, Ill.

Lo-Boy—Stokers. Whiting Corp., Harvey, Ill.

Lo-Hed—Electric Hoists. American Engineering Co., Philadelphia, Pa.

Lo-Pilot—Space and Water Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.

Lo-Set—Stokers. Canton Stoker Corp., Canton, Ohio.

Load King—Hoist. Yale & Towne Mfg. Co., Philadelphia, Pa.

Loadgrip—Duct hangers. United Industries, Madison, Wis.

Lock-Joint—Pipe, Pipe Fittings and Accessories. Inland Steel Products Co., Milwaukee, Wis.

Lock-Seam—Blow Pipe Fittings. Chicago Metal Mfg. Co., Chicago, Ill.

Lockaire—Insulation Board. Plastergon Wall Board Co., Buffalo, N. Y.

Lockbolt—Metal Fasteners. Huck Mfg. Co., Detroit, Mich.

Lok-Joint—Insulating Lath. Insulite Div. Minnesota & Ontario Paper Co., Minneapolis, Minn.

Lone Star—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

Longhorn—Water Heaters. Hotstream Heater Co., Cleveland, Ohio

Loop-the-Loop—Snow Guards. Danzer Metal Works Co., Hagerstown, Md.

Louver Cone—Air Diffusers. Trane Co., LaCrosse, Wis.

Louver Fin—Air Diffusers. Trane Co., LaCrosse, Wis.

Lovejoy-Ideal—V-belts. Lovejoy Flexible Coupling Co., Chicago, Ill.

Lowdensite—Insulation. Insulite Div. Minnesota and Ontario Paper Co., Minneapolis, Minn.

Lown—Slip Roll Forming Machines. San Angelo Foundry & Machinery Co., San Angelo, Texas.

Low Type—Roof Ventilators. Burt Mfg. Co., Akron, Ohio

L & R—Conductor Pipe. Lamb & Ritchie Co., Cambridge, Mass.

L-U—Gravity Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

Luco—Acid Brushes, Flux, Solder. Thos. F. Lukens Metal Co., Philadelphia, Pa

Lume-Tex—Aluminum Paint. Truscon Laboratories, Detroit, Mich.

Lumino—Paint. Koppers Co., Inc., Pittsburgh, Pa.

Luminous Flame—Gas Burners. Zink Co., John, Tulsa, Okla.

Lusterlite—Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.

Lustralumin—Aluminum Paint. Blue Ridge Talc Co., Inc., Henry, Va.

Luxaire—Blower-Filter Units, Burners, Furnaces, Furnace Pipe and Fittings. The C. A. Olsen Mfg. Co., Elyria, Ohio.

Lyonore—Sheets. Lyon-Conklin & Co., Inc., Baltimore, Md.

Lyston—Soldering Flux. Farrelloy Co., Inc., Philadelphia, Pa.

Lytestone—Soldering Flux, Tinning Baths. Farrelloy Co., Inc., Philadelphia, Pa.

M

Macheta—Fans, Fan Blades, Ventilators. Aerovent Fan Co., Piqua, Ohio.

Magic-Aire—Wall Furnace. A. C. Co., Los Angeles, Calif.

Magic Chef—Heater. Magic Chef, Inc., St. Louis, Mo.

Magic Dial—Control Systems. Midwest Automatic Control Co., Des Moines, Iowa.

Magic Dial—Thermostats. Perfex Corp., Milwaukee, Wis.

Magic Heat—Furnaces. Marietta Metal Products Corp., Philadelphia, Pa.

Magnehelic—Draft Gauge. F. W. Dwyer Mfg. Co., Chicago, Ill.

Magne-filter—Air Filters. American-Standard, Pittsburgh, Pa.

Mainliner—Fan Blades. Alan E. Burden Co., Los Angeles, Calif.

Majestic—Roofing. Skylights, Ventilators. W. A. Fingles, Inc., Baltimore, Md.

Mammoth—Furnaces. Stainless & Steel Products Co., Saint Paul, Minn.

Manganarc—Welding Electrodes. Universal Welder Corp., Cleveland, Ohio.

Manganend—Electrodes. Arcos Corp., Philadelphia, Pa.

Manganesed-Phospholene No. 7—Rust Preventive. Western Reserve Laboratories, Cleveland, Ohio.

Manganweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio

Marietta—Enamels and Lacquers. American-Marietta Co., Chicago, Ill.

Mark Time—Time Switches. M. H. Rhodes, Inc., Hartford, Conn.

Marquette—Presses and Dies. E. W. Bliss Co., Canton, Ohio.

Mars—Furnaces. Pacific Gas Heating Co., San Francisco, Calif.

Mars Hi-Boy—Furnaces. Pacific Gas Heating Co., San Francisco, Calif.

Marsalis Chubby—Floor Furnace. American Metal Products Co., Fort Worth, Texas.

Marvair—Air Conditioning Units. Muncie Gear Works, Inc., Muncie, Ind.

Mary-Mac—Storage Water Heaters. McDaniel Mfg. Co., Inc., Dallas, Texas.

Massachusetts—Air Conditioning Units, Blowers, & Fans. Bishop & Babcock Mfg. Co., Cleveland, Ohio.

Master—Controls, Motors, Pulleys, Thermostats. White Mfg. Co., St. Paul, Minn.

Master—Circles, Hangers and Fittings. Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.

Master—Evaporative Coolers. Essick Mfg. Co., Los Angeles, Calif.

Master—Stokers. Muncie Gear Works, Inc., Muncie, Ind.

Master Blowertrol—Thermostatic Hydraulic Control. White Mfg. Co., St. Paul, Minn.

Master Kraft—Coils, Oil Burners, Furnaces. Harvey-Whipple, Inc., Springfield, Mass.

Mastic Board—Insulation. Keystone Asphalt Products Co., Chicago, Ill.

Matchless—Water Heaters. Pacific Coast Heater Corp., San Gabriel, Calif.

Maxitrol—Gas Pressure Regulating Valves. Detroit Regulator Co., Detroit, Mich.

Mayari R—Nickel-Chromium Sheets and Plates. Bethlehem Steel Co., Bethlehem, Pa.

Mayfair—Air Conditioning Units. American Standard, Pittsburgh, Pa.

Mayn Air—Stack Head Dampers. Henry Furnace Co., Medina, Ohio.

McIlvaine—Oil Burners. Mason Machine Co., Inc., York, Pa.

McKee—Gas Burners. Eclipse Fuel Engineering Co., Rockford, Ill.

M. E.—Motors. Marathon Electric Mfg. Corp., Wausau, Wis.

Mecco—Doors and Shutters, Skylights, Ventilators. Moeschel-Edwards Co., Inc., Cincinnati, Ohio.

Meco—Gas Welding Rod, Torches. Modern Engineering Co., St. Louis, Mo.

Meco Jiffy—Soldering Torches. Modern Engineering Co., St. Louis, Mo.

Meletron—Controls. Barksdale Valves, Los Angeles, Calif.

Melo-Air—Furnaces. Agricola Furnace Co., Inc., Gadsden, Ala.

Mel-Rock—Fans, Ventilators & Washers. Mellish & Murray Co., Chicago, Ill.

Memphis Super-Fan—Ventilating Fans. Ford Blow Pipe & Mfg. Co., Memphis, Tenn.

Mercury—Soldering Irons. Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., Danvers, Mass.

Merion—Water Heaters. John Wood Co., Conshohocken, Pa.

Metal-Glo—Metal Cleaners. Turco Products, Inc., Los Angeles, Calif.

Metal-Master—Snips and Shears. J. Wiss & Sons Co., Newark, N. J.

Metal Zipper—Arc Welders. Mid-States Welder Mfg. Co., Chicago, Ill.

Metalbestos—Chimney Caps, Pipe and Fittings. William Wallace Co., Belmont, Calif.

Metaleaf—Aluminum Paint. Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Metallite—Paints. Glidden Co., Cleveland, Ohio.

Metalmaster—Band Saws. DoAll Co., Des Plaines, Ill.

Metalprep—Rust Preventative Chemicals. Neilson Chemical Co., Detroit, Mich.

Meteor—Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.

MetroDeck—Steel Roofing. Goldsmith Metal Lath Co., Cincinnati, Ohio.

Metropac—Oil Burners and Gas Furnaces. Metromatic Mfg. Co., Everett, Mass.

Mex-Ko—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

Meyco—Furnaces. Meyer Furnace Co., Peoria, Ill.

M.F.C.—Gas Floor Furnaces. Moncrief Furnace & Mfg. Co., Inc., Dallas, Texas.

MGO Combination—Gas-Oil Burners. Mettler Co., Inc., The, Los Angeles, Calif.

M-H—Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

M&H—Zinc Sheets. Matthiessen & Hegeler Zinc Co., LaSalle, Ill.

Mica-kote—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.

Micro-Klean—Fuel Oil Filters. Cuno Engineering Corp., Meridan, Conn.

Micro-Mix—Oil Burners. Lennox Furnace Co., Marshalltown, Iowa.

Micro-Weld—Welders. Micro Products Co., Chicago, Ill.

Microlock—Bearings. Shafer Bearing Corp., Downers Grove, Ill.

Micromax—Recorders. Leeds & Northrup Co., Philadelphia, Pa.

MicroRold—Stainless Sheets. Washington Steel Corp., Washington, Pa.

Microtherm—Thermostats. Barber-Colman Co., Rockford, Ill.

Midget—Brakes. A. R. Harris, Hammond, Ind.

Midget—Humidifier Valves. Maid-O'-Mist, Inc., Chicago, Ill.

Midget King—Hoist. Yale & Towne Mfg. Co., Philadelphia, Pa.

Mighty Midget—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.

Mighty Midget—Drills. Stanley Elec. Tool Div., The Stanley Works, New Britain, Conn.

Milcor—Furnace Pipe, Roofing and Roofing Products. Inland Steel Products Co., Milwaukee, Wis.

Milwaukee—Presses and Dies. Doelger & Kirsten, Inc., Milwaukee, Wis.

Minicorder—Recorders. Dickson Co., Chicago, Ill.

Minit Kote—Metal Cleaner. Klem Chemicals, Inc., Detroit, Mich.

Minnemeyer—Conductor Hooks. La-Crosse Steel Roofing & Corrugating Co., LaCrosse, Wis.

Miracle Breeze—Evaporative Cooler Units. Arizona Maintenance Co., Tucson, Ariz.

Mirawal—Metal Sheets. Baltimore Porcelain Steel Corp., Baltimore, Md.

Missouri Flint—Fire Brick. Chicago Fire Brick Co., Chicago, Ill.

Mixend—Electrodes. Arcos Corp., Philadelphia, Pa.

Mizzou—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

M&M—Humidifiers and Fittings, Valves. McDonnell & Miller, Inc., Chicago, Ill.

ModernAire—Oil Burners, Slide Rules, Stokers. Des Moines Furnace & Stove Repair Co., Des Moines, Iowa.

ModernAire—Fans. National Gas Equipment Co., Inc., Terrell, Texas.

Moderne—Blowers, Furnaces. Agricola Furnace Co., Inc., Gadsden, Ala.

Moderne-Aire—Furnaces, Blowers. Agricola Furnace Co., Gadsden, Ala.

Modernistic—Heaters. Agricola Furnace Co., Inc., Gadsden, Ala.

Modu-aire—Air Conditioning Units. U.S. Air Cond. Corp., Minneapolis, Minn.

Moduflame—Floor Furnaces. Mahl Mfg. Co., Huntington Park, Calif.

Moduflow—Control Systems. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Modutrol—Duct Damper Motors. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Modu-Wave—Welders. Sciaky Bros., Inc., Chicago, Ill.

Mogul—Rust Preventive Chemicals, Soot Destroyer. North American Fibre Products Co., Cleveland, Ohio.

Mogul Seal—Compounds. North American Fibre Products Co., Cleveland, Ohio.

Mohawk—Furnaces. American-Standard Corp., Pittsburgh, Pa.

Moisture Magnet—Dehumidifiers. Remington Air Cond. Div., Remington Corp., Auburn, N. Y.

Moldit—Refractories. Refractory & Insulation Corp., New York, N. Y.

Monad-Flow—Gas Burners. Monad Products Co., Dearborn, Mich.

Monarch—Furnaces. Forest City Foundries Co., Cleveland, Ohio.

Moncrief—Blower-Filter Units, Furnaces. Henry Furnace Co., Medina, Ohio.

Monel—Sheets, Plate and Tubing, Electrodes. International Nickel Co., New York, N. Y.

Monend—Arc Welding Electrodes. Arcos Corp., Philadelphia, Pa.

Monitor—Furnaces. Marshall Furnace Co., Marshall, Mich.

Monmouth—Humidifiers. Cleveland Humidifier Co., Cleveland, Ohio.

Mono-Block—Furnace Insulation. Baldwin Hill Co., Trenton, N. J.

Monocast—Refractories. Ramtite Co., Chicago, Ill.

Monogram—Furnaces. Quincy Stove Mfg. Co., Quincy, Ill.

Monolinc—Refractories. Quigley Co., Inc., New York, N.Y.

Monoport—Gas Burners. Modern Controls Corp., Centerline, Mich.

Monovent—Roof Ventilators. Burt Mfg. Co., Akron, Ohio

Morflex—Flexible Couplings. Morse Chain Co., Ithaca, N. Y.

Morlex—Rust Preventives. Carbide and Carbon Chemicals Co., Div. Union Carbide and Carbon Corp., New York, N. Y.

Morse Cyclone—Blow Pipe Collectors. Goergen-Mackwirth Co., Inc., Buffalo, N. Y.

Mor-Sun—Oil Burners, Furnaces. Morrison Steel Products, Inc., Buffalo, N. Y.

Mortemp Chimney Furnace—Air Conditioning Furnaces. Chimney-Furnace Corp., Rockville, Md.

Mortex—Metal Protective Coatings. J. W. Mortell Co., Kankakee, Ill.

Mortite—Caulking and Glazing Compounds, Roofing Paint. J. W. Mortell Co., Kankakee, Ill.

Motorized Draft-O-Stat—Controls. Hotstream Heater Co., Cleveland, Ohio.

Motorstoker—Stokers and Air Conditioning Furnaces. Hershey Machine & Foundry Co., Manheim, Pa.

Mototurb—Ventilators. Uno Ventilator Co., Malden, Mass.

Mountain Air—Evaporative Conditioners and Fans. Central States Mfg. Co., Inc., Arkansas City, Kan.

Moyno—Pumps. Robbins & Myers, Inc., Springfield, Ohio.

M-R—Wire Glass. H. H. Robertson Co., Pittsburgh, Pa.

M & T—Arc Welders. Metal & Thermit Corp., New York, N. Y.

Muckle-Vents—Roof Ventilators. Muckle Mfg. Co., Owatonna, Minn.

Mule-Hide—Cement, Caulking Compounds, Paint and Roofing. Lehon Co., Chicago, Ill.

Multi-Duty—Filters. American Air Filter Co., Inc., Louisville, Ky.

Multi-duty—Pulleys. Gates Rubber Co., Denver, Colo.

Multi-Flame—Gas Burners. American Gas Burner, Inc., Indianapolis, Ind.

Multi-Max—Punch Presses. Diamond Machine Tool Co., Los Angeles, Calif.

Multi-V—Belts. B. F. Goodrich Co., Akron, Ohio.

Multi-Vent—Air Diffuser. Pyle-National Co., Multi-Vent Div., Chicago, Ill.

Multi-Zone—Conditioners. Micheli Air Conditioning Co., Inc., Schenectady, N. Y.

Multiblade—Welding Fume Exhausters. General Blower Co., Morton Grove, Ill.

Multiclone—Collectors. Western Precipitation Corp., Los Angeles, Calif.
Multitherm—Air Conditioning Units. Clarage Fan Co., Kalamazoo, Mich.
Multivane—Blowers. Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Murex—Welding Electrodes. Metal & Thermit Corp., New York, N. Y.
M-VB—Fittings, Valves. Scovill Mfg. Co., Morency-Van Buren Div., Sturgis, Mich.
M/W—Filters. American Air Filter Co., Inc., Louisville, Ky.
Myka-Disk—Baffles. Insulation & Refractories Co., Williamson, N. Y.

N

Nairoil—Oil Burners, Combustion Chambers. National Airoil Burner Co., Philadelphia, Pa.
Nalco—Flux. National Lead Co., New York, N. Y.
NarroWall—Wall Furnaces. Holly Mfg. Co., Pasadena, Calif.
National—Blower-Filter Units, Furnaces. MaGirl Foundry & Furnace Co., Bloomington, Ill.
National—Furnaces. Excelsior Stove & Mfg. Co., Quincy, Ill.
National—Horizontal Furnaces. Stainless & Steel Products Co., St. Paul, Minn.
National—Water Heaters. Mustee Heater Co., Cleveland, Ohio.
National Champion—Furnaces. National Heater Co., St. Paul, Minn.
Natur-Temp—Flame-proof Cotton Insulation. Barnhardt Mfg. Co., Charlotte, N. C.
Naturzone—Board Insulation. Wilson & Co., Inc., Chicago, Ill.
NCG—Soldering and Welding Flux, Welding Rods. National Cylinder Gas Co., Chicago, Ill.
Nebel-Kote—Paint. Nebel Mfg. Co., Cleveland, Ohio.
Nebelastic—Roof Cement, Nebel Mfg. Co., Cleveland, Ohio.
Nelson—Blower-Filter Units, Furnaces, Stokers. Heating Assurance, Inc., Spokane, Wash.
Nelweld—Welders. Nelson Stud Welding Div., Gregory Industries, Inc., Lorain, Ohio.
Nev-A-Rust—Paints. Glidden Co., Cleveland, Ohio.
Never Slip—Conductor Fittings. LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
Never-Stain—Aluminum Nails, Ridge Roll, Roofing. Nichols Wire & Aluminum Co., Davenport, Iowa.
New American—Smoke Pipe Dampers. Griswold Mfg. Co., Erie, Pa.
New Braze—Flux. Sherman & Co., New York, N. Y.
New Departure—Oil Burners. Breeze Corps., Inc., Newark, N. J.
New Detroit—Draft Gauges. Detroit Air Conditioning Service Co., Inc., Nashville, Mich.
Niagara—Furnaces, Blowers, Oil Burners. Forest City Foundries Co., Cleveland, Ohio.
Nib-Shear—Power Nibber-Shear. H.A. Mfg. Co., York, Pa.
Nibco—Copper Tube Fittings. Northern Indiana Brass Co., Elkhart, Ind.
Nickelend—Electrodes. Arcos Corp., Philadelphia, Pa.
Nickeloid—Sheets. American Nickeloid Co., Peru, Ill.
Nickend—Electrodes. Arcos Corp., Philadelphia, Pa.
Nicuend—Electrodes. Arcos Corp., Philadelphia, Pa.
Nifer—Metal Sheets. General Plate Div., Metals & Controls, Attleboro, Mass.
Niteair—Night Air Cooling Fans. Lau Blower Co., Dayton, Ohio.
Nitecool—Fans. Air Equipment Co., Inc., Chicago, Ill.
Noah's Pitch—Roof Cement, Waterproofing. Philip Carey Mfg. Co., Cincinnati, Ohio.
NoDrip—Insulation. J. W. Mortell Co., Kankakee, Ill.
No-Dust—Grinders. Hammond Machinery Builders, Inc., Kalamazoo, Mich.
No-Flex—Registers and Faces. Hart & Cooley Mfg. Co., Holland, Mich.
No-Spat—Welding Flux. Midland Paint & Varnish Co., Cleveland, Ohio.
No-Streak—Registers. Rock Island Register Co., Rock Island, Ill.
No Tar In—Roofing Paint. Rutland Fire Clay Co., Rutland, Vt.
Nokorode—Flux. Chase Brass & Copper Co., Inc., Waterbury, Conn.
Non-Clogging—Spray Nozzles. Link Belt Co., Chicago, Ill.
Non-Con-Dux—Cement, Paper, Paste. Grant Wilson, Inc., Chicago, Ill.
Non-Syphoning—Steel Roofing. Inland Steel Products Co., Milwaukee, Wis.
Norblo—Blowers, Fittings, Collectors, Housing, Air Washers. Northern Blower Co., Cleveland, Ohio.
Norco—Stove and Furnace Repairs. Northwestern Stove Repair Co., Chicago, Ill.
Northwind—Air Conditioning Unit. Pleasantaire Corp., Washington, D. C.
Norwesco—Ducts, Fittings, Gutters, Pipe, Ridge Rolls, Roof Trim. Northwest Metal Products, Inc., Seattle, Wash.
Nor'wester—Blowers. Grand Rapids Die & Tool Co., Grand Rapids, Mich.
Novoid—Bases, Insulation. National Cork Co., Englewood, N. J.
Nu-Air—Fan Blades, Fans, Louvres, Ventilators. Meier Electric & Machine Co., Indianapolis, Ind.
Nu-Air—Odor Adsorbers. Aerotrol Engineering Corp., Pittsburgh, Pa.
Nu-Alpina—Gravity Roof Ventilators. Inland Steel Products Co., Milwaukee, Wis.
Nu-Braze—Flux, Solder. Sherman & Co., New York, N. Y.
Nu Galv—Metal Protecting Paint. Southern States Iron Roofing Co., Savannah, Ga.
Nu-Grip—Snips and Shears. J. Wiss & Sons Co., Newark, N. J.
Nu-Notch—Ventilators. Knowles Mushroom Ventilator Co., Upper Montclair, N. J.
Nu-Trojan—Combustion Chambers. A. R. Webber Co., Inc., New Haven, Conn.
Nu-Wood—Rigid Insulation. Wood Conversion Co., St. Paul, Minn.
Nudeck—Roof Cement. United Gilsonite Laboratories, Scranton, Pa.
Nupla—Mallets. New Plastic Corp., Hollywood, Calif.
Nutipe—Gas Conversion Burners. Columbia Burner Co., Toledo, Ohio.
Nuvent—Ventilators. Aeolus Dickinson, Chicago, Ill.

O

Oasis—Dehumidifiers. Ebco Mfg. Co., Columbus, Ohio
Octagon Power—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.
Octogon Siphon—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.
Octopus—Exhausters. Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
OEM—Combustion Chambers, Oil Burner Fittings. Oil Equipment Mfg. Corp., New Haven, Conn.
Ohio Triple Twisted—Wire Hangers. Ohio Wire Products Co., Dover, Ohio.
Oil-A-Fire—Burners, Furnaces. Automatic Firing Corp., St. Louis, Mo.
Oil-Aire-Flo—Oil Furnaces. Lennox Furnace Co., Marshalltown, Iowa.
Oil Economy—Furnaces. International Heater Co., Utica, N. Y.
Oil-Flo—Furnaces. Coal-O-Matic Co., Trucksville, Pa.
Oil-n-Aire—Oil Burners. Breeze Corps., Inc., Newark, N. J.
Oil-O-Matic—Oil Burners, Furnaces. Williams Oil-O-Matic Div., Eureka-Williams Corp., Bloomington, Ill.
Oilfyre—Oil Furnaces. Lennox Furnace Co., Marshalltown, Iowa.
Oilifter—Fuel Oil Pump. A-P Controls Corp., Milwaukee, Wis.
Oilway—Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
OK—Grinders. Hammond Machinery Builders, Inc., Kalamazoo, Mich.
Ol'Faithful—Humidifiers. Maid-O'-Mist, Inc., Chicago, Ill.
Olympic—Heaters, Washington Stove Works, Everett, Wash.
One-Minute—Furnaces. Worsham Co., Inc., St. Louis, Mo.
Original Dowagiac—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.
Out-O-Wall—Registers. Rock Island Register Co., Rock Island, Ill.
Ovaltube—Gas Burners. Beck Engineering Combustion Kompany, St. Louis, Mo.
OX—Punches. Parker Kalon Corp., New York, N. Y.
Oxweld—Welding Apparatus. Linde Air Products Co., New York, N. Y.
Oxycuttend—Electrodes. Arcos Corp., Philadelphia, Pa.
Ozark—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
Ozite—Insulation. American Hair & Felt Co., Chicago, Ill.

P

Pabco Coolite—Sheet Metal Paint. Pabco Products Inc., San Francisco, Calif.
Pacific—Furnaces. W. W. Rosebaugh Co., Salem, Ore.
Pacific—Water Heaters. United States Radiator Corp., Detroit, Mich.
Packaged Weather—Store Coolers. General Electric Co., Bloomfield, N. J.
Packard—Water Heaters. W. M. Dary Co., Long Beach, Calif.
Paintbond—Bonderized Sheets. U. S. Steel Co., Pittsburgh, Pa.
Paintgrip—Metal Sheets. Armco Steel Corp., Middletown, Ohio.
Pak-Ice—Machines. Vilter Mfg. Co., Milwaukee, Wis.
Palco Wool—Saferized—Insulation. Pacific Lumber Co., San Francisco, Calif.
Pandux—Indicating Thermometers. Pacific Transducer Co., Los Angeles, Calif.
Panelaire—Wall Furnaces. Payne Furnace Div., Affiliated Gas Equipment Inc., Monrovia, Calif.
Panelray—Wall Heaters, Suspended Furnaces. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Papico—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.
Par—Compressors. Lynch Corp., Toledo, Ohio.

Paragon Booster—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.

Paramount—Evaporative Air Conditioners. Essick Mfg. Co., Los Angeles, Calif.

Paramount—Flashing. Flemm Lead Co., Inc., Long Island City, N. Y.

Paramount—Hollow Metal Windows. Willis Steel Corp., Galesburg, Ill.

Paramount-Master—Evaporative Coolers. Essick Mfg. Co., Los Angeles, Calif.

Parco—Skylight Lifts. Park City Cornice Works, Inc., Bridgeport, Conn.

Parco—Metal Cleaners and Rust Preventive Compounds. Parker Rust-Proof Co., Detroit, Mich.

Parx LPG—Water Heaters. EverHot Heater Co., Detroit, Mich.

Patrol—Gas Burner Pilots. Cleveland Heater Co., Cleveland, Ohio.

Pawnee—Furnaces. American-Standard Corp., Pittsburgh, Pa.

Payneheat—Furnaces. Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.

PBA Unit—Utility Room Furnace. Dowagiac Steel Furnace Co., Dowagiac, Mich.

P-C—Heaters. Pernot Corp., Norwalk, Calif.

Peerless—Stokers. Eddy Stoker Corp., Chicago, Ill.

Peerless—Blowers, Blower-Washer Units. Washers. New York Blower Co., Chicago, Ill.

Peerless—Eaves Trough Hangers. Abbott Mfg. Co., Painesville, Ohio.

Pemco—Stainless Firebox Fittings, Baffles. Oil Equipment Mfg. Co., New Haven, Conn.

Penetrol—Paint. Flood Co., Cleveland, Ohio.

Penfield—Water Heater. John Wood Co., Conshohocken, Pa.

Penflex—Flexible Metal Hose and Fittings. Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa.

Penglass—Roof Ventilators. Pennsylvania Wire Glass Co., Philadelphia, Pa.

Penn-Aire—Furnaces. Union Mfg. Co., Inc., Boyertown, Pa.

Penna—Furnaces. Pennsylvania Furnace & Iron Co., Warren, Pa.

PennSalt—Rust Preventive, Chemicals and Cleaners. Pennsylvania Salt Mfg. Co., Philadelphia, Pa.

Pentco—Punches & Snips. Penn Tool Co., Philadelphia, Pa.

Perco-Flash—Water Heaters. Kresno-Stamm Mfg. Co., Palisades Park, N. J.

Percoproof—Waterproofing. Philip Carey Mfg. Co., Cincinnati, Ohio.

Perfectaire—Air Conditioning Units, Dehumidifiers, Furnaces, Oil Heaters. Air Conditioning Engineering Co., Cambridge, Mass.

Perfection—Eaves Trough Fittings and Accessories. Iwan Bros., South Bend, Ind.

Perfecto—Combustion Chambers. A. P. Green Fire Brick Co., Mexico, Mo.

Perim-A-Base—Small Pipe Heating Systems. Berger Furnace Mfg. Co., Pittsburgh, Pa.

Permaclad—Clad Sheets. Alan Wood Steel Co., Conshohocken, Pa.

Permadine—Coating Chemical for Steel or Iron Surfaces. American Chemical Paint Co., Ambler, Pa.

Permaglas—Water Heaters. A. O. Smith Corp., Milwaukee, Wis.

Pernoco—Evaporative Coolers. Pernot Corp., Norwalk, Calif.

Perry—Damper Clips and Tips. Griswold Mfg. Co., Erie, Pa.

Pet—Oil Burners. Breeze Corps., Inc., Newark, N. J.

PeTeCo—Baffles and Combustion Chambers. B. A. Peterson Co., Dowagiac, Mich.

Petro—Oil Burners, Furnaces and Water Heaters. Petroleum Heat & Power Co., Stamford, Conn.

Pexto—Metal Workers' Machines and Tools, Roofers Tools. Peck, Stow & Wilcox Co., Southington, Conn.

P & H—Cranes, Welding Rods, Electrodes, Hoists, Arc Welders. Harnischfeger Corp., Milwaukee, Wis.

Pickle Polish—Stainless Cleaner. American Chemical Paint Co., Ambler, Pa.

Pilotstat—Gas Pilot Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Pion-Aire—Wall Furnaces. Pioneer Water Heater Corp., Los Angeles, Calif.

Pioneer—Controls. Crown Controls Co., Inc., New Bremen, Ohio.

Pioneer—Oil Burners. Scott-Newcomb, Inc., St. Louis, Mo.

Pioneer—Water Heaters. Hotstream Heater Co., Cleveland, Ohio

Pittsburgh—Suspended Furnaces. Automatic Gas Equipment Co., Pittsburgh, Pa.

P.I.V.—Gear. Link Belt Co., Chicago, Ill.

P-K—Nails, Screws, Parker-Kalon Corp., New York, N. Y.

Planeweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.

Plasti-Static—Air Filters. Master Products Co., Inc., Chicago, Ill.

Plasti-Calk—Caulking Compounds. Chamberlin Co. of America, Detroit, Mich.

Plastic Elastigum—Cement. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

Plastic Insulcrete—Refractories. Quigley Co., Inc., New York, N. Y.

Plastic PB—Cement Barret Div., Allied Chemical & Dye Corp., New York, N. Y.

PlastiKon—Rubber Putty. B. F. Goodrich Co., Akron, Ohio.

Plastiktrim—Plastic Mouldings, Trim. R. F. Werner Co., New York, N. Y.

Plastite—Roof Cement. Coopers Creek Chemical Corp., West Conshohocken, Pa.

Plastoid—Caulking Compounds, Furnace Cement. Plastic Products Co., Detroit, Mich.

Playford—Stokers. Rosedale Foundry & Machine Co., Pittsburgh, Pa.

Plexiform—Blowers. Bayley Blower Co., Milwaukee, Wis.

Polyken—Industrial Tape. Bauer & Black Div., The Kendall Co., Chicago, Ill.

Porto-Shear—Electric Shears. Black & Decker Mfg. Co., Towson, Md.

Portovent—Flexible Hose. American Ventilating Hose Co., New York, N. Y.

Power-Flow—De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.

Power-Pac—Fans. Uno Ventilator Co., Malden, Mass.

Power Vane—Pneumatic Grinders. Chicago Pneumatic Tool Co., New York, N. Y.

Poweraire—Furnaces. Jackson & Church Co., Saginaw, Mich.

Powergas—Gas Burners. Jackson & Church Co., Saginaw, Mich.

Powerhouse—Insulating Cement. Baldwin-Hill Co., Trenton, N. J.

Poweroil—Oil Burners. Jackson & Church Co., Saginaw, Mich.

PowerRated—Commercial-Industrial Furnaces. Jackson & Church Co., Saginaw, Mich.

Powerstat—Gas Pressure Regulating Valves. Mercoid Corp., Chicago, Ill.

Powrmatic—Oil Burners. Kresno-Stamm Mfg. Co., Palisades Park, N. J.

Precipitron—Electrostatic Air Filter. Westinghouse Elec. Corp., Sturtevant Div., Hyde Park, Boston 36, Mass.

Premier—Welding Rod. American Steel & Wire Co., Cleveland, Ohio.

Premier Automatik—Stoker-Fired Air Conditioning Furnaces. Premier Furnace Co., Dowagiac, Mich.

Premier DeLuxe—Furnaces. Premier Furnace Co., Dowagiac, Mich.

Premier Master—Furnaces. Premier Furnace Co., Dowagiac, Mich.

Pre-Notch—Ducts, Pipe and Fittings. Gray Metal Products, Inc., Rochester, N. Y.

Prepo—Soldering Torches. Pressure Products Corp., Skokie, Ill.

Preprite—Rust Preventive Chemicals. Neilson Chemical Co., Detroit, Mich.

Prepwash—Rust Preventive Chemicals. Neilson Chemical Co., Detroit, Mich.

Presstico—Furnace and Roof Cement, Compounds, Paint. Presstite Engineering Co., St. Louis, Mo.

Presteel—Metal Stampings. Worcester Pressed Steel Co., Worcester, Mass.

Presto—Soldering Torch. American Products Corp., Chicago, Ill.

Prest-O-Lite—Soldering Coppers, Soldering Torches, Welding Equipment. Linde Air Products Co., New York, N. Y.

Prest-O-Weld—Oxy-Acetylene Welding Equipment, Torches. Linde Air Products Co., New York, N. Y.

Prime-Kote—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.

Princo—Hygrometers, Psychrometers, Electric Relays, Thermometers and Thermostats. Precision Thermometer and Instrument Co., Philadelphia, Pa.

Propellair—Fans and Ventilators. Robbins & Myers, Inc., Springfield, Ohio.

Prop-R-Temp—Air Conditioning Units. Typhoon Air Cond. Co., Inc., Brooklyn, N. Y.

Protectal—Sheet Metal Paint. Coopers Creek Chemical Corp., West Conshohocken, Pa.

Protecto-glo—Controls. Minneapolis-Honeywell Reg. Co., Minneapolis, Minn.

Protectoline—Rust Preventive Chemicals. Magnus Chemical Co., Garwood, N. J.

Protector—Snow Guards. David Levow, New York, N. Y.

Protector—Germicidal Lamps. Merchandising and Manufacturing Associates, Inc., Lancaster, Pa.

Protectorelay—Oil Burner Relays. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Puffglass—Air Filters. Drico Industrial Corp., New York, N. Y.

Pul-Air—Ventilators. Penn Ventilator Co., Philadelphia, Pa.

Pul-Lift—Hoist. Yale & Towne Mfg. Co., Philadelphia, Pa.

Pulverzone—Stokers. American Coal Burner Co., Chicago, Ill.

Punchawl—Tools. Hub Specialty Co., Reading, Mass.

Punkah—Louvers. Wilfrid O. White & Sons, Inc., Boston, Mass.

Pur Air—Odor Adsorbers. American Solvent Recovery Corp., Columbus, O.

Puraire—Blower-Filters. Kortz Blower Mfg. Co., Grand Rapids, Mich.

Purox—Oxy-Acetylene Welding Equipment and Torches. Linde Air Products Co., New York, N. Y.

Pyralux—Enamels and Lacquers. E. I. du Pont de Nemours & Co., Wilmington, Del.

Pyrotron—Temperature Recorders. Bailey Meter Co., Cleveland, Ohio.

Q

Quad—Furnace Blowers. Trade-Wind Motorfans, Inc., Los Angeles, Calif.

Quaker City—Eaves Trough and Gutters, Conductor Fittings and Accessories, Pipe, Ridge Rolls and Ridging. Berger Bros. Co., Philadelphia, Pa.

Quantrol—Duct Turning Vanes. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

Q-Chrome—Insulating Cement. Quigley Co., Inc., New York, N. Y.

Q-Chromastic—Insulating Cement. Quigley Co., Inc., New York, N. Y.

Quick Action—Clamps. Roesch Tool Products, Los Angeles, Calif.

Quick-As-Wink—Solenoid Valves, Metal Hose. Hunt & Son, Inc., C. B., Salem, Ohio

Quick Heat—Furnaces, Heaters. American Stove Co., St. Louis, Mo.

Quick Heat—Heating Equipment. Tjernlund Mfg. Co., St. Paul, Minn.

Quick Heater—Oil Burners, Furnaces, Stokers. Quick Furnace & Supply Co., Des Moines, Iowa.

Quick-Set—Dividers and Notchers. Reiner & Campbell Co., Inc., Elizabeth, N. J.

Quick-Set—Waterproofing. American Fluresit Co., Cincinnati, Ohio.

Quickwork—Shears and Sheet Metal Machines. Whiting Corp., Harvey, Ill.

Quiet Flame—Oil Burners. Volcano Burner Corp., New York, N. Y.

Quiet Kool—Air Conditioning Units. Quiet-Heet Mfg. Corp., Newark, N. J.

Quiet Zone—Blowers. Palmer Mfg. Co., Phoenix, Ariz.

Quik-Shot—Soldering Iron. Kemode Mfg. Co., New York, N. Y.

Quilt—Insulation. Samuel Cabot, Inc., Boston, Mass.

Q-T Ductliner—Celotex Corp., Chicago, Ill.

R

Racine—Stokers. Nelson Bros. & Strom Co., Racine, Wis.

Radiant—Heaters. Phillips & Buttorff Mfg. Co., Nashville, Tenn.

Radiant Comfort—Gas Burners. Van's Gas Burner Service, Detroit, Mich.

RadianTile—Ducts and Fittings. Cannelton Sewer Pipe Co., Cannelton, Ind.

Radius Master—Templates. Rapidesign, Inc., Glendale, Calif.

Radolite—Insulating Cement and Refractories. Pyrolite Products Co., Cleveland, Ohio.

Raintite—Roof Ventilators. Aeolus Dickinson, Chicago, Ill.

Ramco—Chimney Caps and Tops, Ventilators. Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.

Ramfeed—Stokers. Canton Stoker Corp., Canton, Ohio.

Ranarex—CO_2 Analyzers. Permutit Co., New York, N. Y.

Ranchief—Furnaces. Conco Engineering Works, Mendota, Ill.

Range-Ventor—Fans. Universal Blower Co., Birmingham, Mich.

Rawl-Anchors—Bolts. Rawlplug Co., Inc., New York, N. Y.

Rawl-Drive—Masonry Nails and Expansion Bolts. Rawlplug Co., Inc., New York, N. Y.

Rawl-Tapers—Expansion Bolts. Rawlplug Co., Inc., New York, N. Y.

Rawl-Toggle Bolts—Bolts. Rawlplug Co., Inc., New York, N. Y.

Reale-Heat—Furnaces. Peerless Sales, Lincoln, Nebr.

Reco—Coils. Roessing Mfg. Co., Pittsburgh, Pa.

Reco—Fans, Motors, Buffers, Relays and Switches. Reynolds Electric Co., River Grove, Ill.

Recoy—Air Conditioning Units and Coils. Refrigeration Economics Co., Inc., Canton, Ohio.

Red Cap—Spinner Ventilator. Warner Ventilator Co., LaGrange, Ind.

Red Crown—Domestic Water Heaters. Hynes & Cox Electric Corp., Watervliet, N. Y.

Red Devil—Furnace Cement. Pecora Paint Co., Philadelphia, Pa.

Red End—Saws. Simonds Saw & Steel Co., Fitchburg, Mass.

Red Metal—Roof Paint. Rutland Fire Clay Co., Rutland, Vt.

Red Metallic—Roofing Paint. Clinton Metallic Paint Co., Clinton, N. Y.

Red-Reading-Mercury—Hygrometers, Psychrometers and Thermometers. The Palmer Thermometers, Inc., Cincinnati, Ohio.

Red Seal—Sheets. Benjamin Wolff and Co., Chicago, Ill.

Red Streak—Shear Blades. Simonds Saw & Steel Co., Fitchburg, Mass.

Red Top—Insulation. United States Gypsum Co., Chicago, Ill.

Red Top—Thermostats. H-B Instrument Co., Philadelphia, Pa.

Red X—Cleaners and Polishers. Turco Products, Inc., Los Angeles, Calif.

Reddy-On—Furnace Door Closer. Leisur-Maid Mfg. Corp., Grand Rapids 3, Mich.

Redi—Stokers. General Machinery Co., Spokane, Wash.

Redi-Nail—Eaves Trough Hangers. Abbott Mfg. Co., Painesville, Ohio.

Redi-Paint—Sheet Metal Paint. Turco Products, Inc., Los Angeles, Calif.

Redi-Set—Sheet Metal Workers' Tools. Whitney Metal Tool Co., Rockford, Ill.

Rego—Brazing Torches. National Cylinder Gas Co., Chicago, Ill.

Rego—Flux. Bastian-Blessing Co., Chicago, Ill.

Reillaloy—Stove and Furnace Repairs. Pittsburgh Furnace Parts Co., Pittsburgh, Pa.

Reinhard—Gas Burners. LaHarco Industries, Minneapolis, Minn.

Remotaire—Air Conditioning Units. American Standard, Pittsburgh, Pa.

Renovair—Odor Adsorbers. Boyle-Midway, Inc., New York, N. Y.

Renu-glas—Air Filters. American Air Filter Co., Inc., Louisville, Ky.

Repco—Furnaces. Republic Products Co., Philadelphia, Pa.

Republic—Induced Draft Blowers, Conversion Gas Burners, Incinerators, & Heat Savers. Auto-gas Co., Chicago, Ill.

Republic-Taylor—Terne Roofing Plates. Republic Steel Corp., Cleveland, Ohio.

Resiscote—Paint. Reilly Tar & Chemical Corp., Indianapolis, Ind.

Revolving—Ventilator. Accurate Sheet Metal & Mfg. Works, Chicago, Ill.

Revolving—Roof Ventilators. Burt Mfg. Co., Akron, Ohio

Rex—Bearings, Pillow Blocks, Blower-Filter Units, Blowers, Fan-Filter Units, Blower Wheels. Air Controls Inc., Cleveland, Ohio.

Rex—Bearings and Nozzles. Chain Belt Co., Milwaukee, Wis.

Rex—Controls, Draft Diverters, Water Heaters. Cleveland Heater Co., Cleveland, Ohio.

Rex—Roof Flashing. Simplex Mfg. Co., Fond du Lac, Wis.

Rex-Airate—Fans, Ventilators. Air Controls, Inc., Cleveland, Ohio.

Rex-Air-Pak—Blower Units. Air Controls, Inc., Cleveland, Ohio.

Rex-Flex—Flexible Duct Connectors. Flexonics Corp., Maywood, Ill.

Rex Junior—Welders. Rex Welder & Engineering Co., Kansas City, Mo.

Rex-Tube—Flexible Duct Connectors. Flexonics Corp., Maywood, Ill.

Rex Vibra-Sorbers—Vibration Eliminating Metal Hose. Flexonics Corp., Maywood, Ill.

Rex-Weld—Flexible Duct Connectors. Flexonics Corp., Maywood, Ill.

Rex-Weld Unimetal—Flexible Hose. Flexonics Corp., Maywood, Ill.

Rexarc—Welding Electrodes, Welding Rods. Sight Feed Generator Co., West Alexandria, Ohio.

Rexco—Refractories. Rex-Roto Corp., Detroit, Mich.

Rexide—Metal Protecting Paint. A. C. Horn Co., Inc., Long Island City, N. Y.

Rexoil—Oil Burners and Furnaces. Reif-Rexoil, Inc., Buffalo, N. Y.

Rexwelders—Spot Welders. Rex Welder & Engineering Co., Kansas City, Mo.

Rezistal—Stainless Steels. Crucible Steel Co. of America, New York, N. Y.

R & G—Grilles. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

Rheotrol—Horizontal Oil Burners. Breese Burners, Inc., Chicago, Ill.

Rhinamel—Enamels. Tropical Paint & Oil Co., Cleveland, Ohio.

R & I—Furnace Cement and Insulation, Baffles, Combustion Chambers. Refractory & Insulation Corp., New York, N. Y.

Rid All—Incinerators. Schwab Furnace Co., Milwaukee, Wis.

Ridgevent—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.

Ridgolator—Ridge Roof Ventilator. Klauer Mfg. Co., Dubuque, Iowa.

Rigid—Hack Saw Frames. Machine Rebuilding Co., Detroit, Mich.

Rigid-Tex—Metal Sheets. Rigidized Metals Corp., Buffalo, N. Y.

Rip-o-Lin—Enamels. Glidden Co., Cleveland, Ohio.

Rippl—Paint. Hilo Varnish Corp., Everett, Mass.

Ripple Fin—Coils. McQuay, Inc., Minneapolis, Minn.

Ripple Tube—Coils. McQuay, Inc., Minneapolis, Minn.

Rival—Conductor Straps. David Levow, New York, N. Y.

River Breeze—Exhausters and Fans. Kloppenborg Aluminum Fdry., Davenport, Iowa.

Rivnut—Blind Fasteners. B. F. Goodrich Co., Akron, Ohio.

R.I.W.—Paints and Waterproofing. Toch Bros., Inc., Staten Island, N. Y.

R. M.—Slip Roll Forming Machines. Riverside Machinery Co., Minneapolis, Minn.

R & M—Cranes & Motors. Robbins & Myers, Inc., Springfield, Ohio.

Robinson—Presses. New Albany Machine Mfg. Co., New Albany, Ind.

Robot—Thermostats. Miller-Harris Instrument Co., Milwaukee, Wis.
Rol-Away—Carrier Beall Pipe & Tank Corp., Portland, Ore.
Rollaire—Air Conditioning Furnaces. Hipoint Corp., Bellefontaine, Ohio.
Roof Flange—Flashing. Eagle-Picher Co., Cincinnati, Ohio.
Roofkoter—Paint. Tropical Paint & Oil Co., Cleveland, Ohio.
Roofsaver—Roof Cement. Baer Brothers, New York, N. Y.
Rotary—Ventilators. Swartwout Co., Cleveland, Ohio.
Roto—Insulating Cement and Combustion Chambers. Rex-Roto Corp., Detroit, Mich.
Roto-Clone—Dust Collectors. American Air Filter Co., Inc., Louisville, Ky.
Rotoflame—Oil Burners. Oil Equipment Laboratories, Inc., Elizabeth, N. J.
Rotojet—Nozzles. Binks Mfg. Co., Chicago, Ill.
Roxaprene—Enamels and Lacquers. Roxaline Flexible Finishes, Inc., Elizabeth, N. J.
Royal—Furnaces. Hart & Crouse Corp., Oneida, N. Y.
Royal—Space Heaters. Chattanooga Implement & Mfg. Co., Chattanooga, Tenn.
Royal—Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
Royal Blue—Acid and Furnace Brushes. Schaefer Brush Mfg. Co., Milwaukee, Wis.
Royal Clipper—Metal Cutter. Merchandising and Manufacturing Associates, Inc., Lancaster, Pa.
Royalastic—Roof Cement. A. Wilhelm Co., Reading, Pa.
RP—Dust & Grease Filters. Research Products Corp., Madison, Wis.
RPM—Paint and Roofing Steel. H. H. Robertson Co., Pittsburgh, Pa.
R-R-M—Hygrometers, Psychrometers, Thermometers. Palmer Thermometers, Inc., Cincinnati, Ohio.
Rubalt—Paints. Alfred Hague & Co., Brooklyn, N. Y.
Rubber-in-Shear—Vibration Isolating Pads. Korfund Co., Long Island City, N. Y.
Rubyfluid—Solder, Soldering Flux, Ruby Chemical Co., Columbus, Ohio.
R-U-F—Fans. Reed Unit-Fans, Inc., New Orleans, La.
Rusco—Windows. F. C. Russell Co., Cleveland, Ohio.
Rust Bloc No. 20—Coating. Turco Products, Inc., Washington, D. C.
Rust Sol—Metal Cleaner. Klem Chemicals, Inc., Dearborn, Mich.
Rustnil—Paints. National Engineering Products, Inc., Washington, D. C.
Rustrem—Aluminum Paint. Speco, Inc., Cleveland, Ohio.
Rysdon—Ventilators. Sioux Steel Co., Sioux Falls, S. D.
Rystrom—Fuel Oil Pumps. Polo Pump Co., Polo, Ill.

S

Saf-Aire—Furnaces. Stewart-Warner Corp., South Wind Div., Indianapolis, Ind.
Safe-Hi—Ladder Shoes. Rose Mfg. Co., Denver, Colo.
Safety Circle—Motors. Allis-Chalmers Mfg. Co., Milwaukee, Wis.
St. Clair—Circulating Heaters. Enterprise Foundry, Inc., Belleville, Ill.
St. Louis—Stoker. Ormsby-Osterman Co., St. Louis, Mo.
Sal-Mo—Cement, Insulation, Pipe Coverings. Sall Mountain Co., Hamilton, Ohio.
Samco—Cement. Standard Asbestos Mfg. Co., Chicago, Ill.
Samco—Floor Furnaces and Space Heaters. Samuel Stamping & Enameling Co., Chattanooga, Tenn.
Sampson—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.
Sanders—Floor Furnace. Ford Blow Pipe & Mfg. Co., Memphis, Tenn.
Sav-A-Tank—Rust Preventive. Sudbury Laboratory, South Sudbury, Mass.
Sav-Haf—Oil Burners. Breeze Corps., Inc., Newark, N. J.
Saw Gun—Portable Hack Saw. Mid-States Welder Mfg. Co., Chicago, Ill.
Sax—Oil Burners. Aldrich Co., Wyoming, Ill.
SC—Furnaces, Heaters. Surface Combustion Corp., Toledo, Ohio.
Schild-Bilt—Attic Fans. Fresh Air Circulator Co., Houston, Tex.
Schmidt—Soldering Coppers, Soldering and Brazing Torches. Minn-Kota Foundry & Mfg. Co., Fargo, N. D.
Sco-Co—Roof Cement, Caulking Compounds, Paint, Waterproofing. Southport Paint Co., Savannah, Ga.
Scotch Brand—Duct Insulation. Minnesota Mining & Mfg. Co., St. Paul, Minn.
Scotsman—Heaters, Furnaces. American Gas Machine Co., Albert Lea, Minn.
Screw-Tite—Nails. Independent Nail & Packing Co., Bridgewater, Mass.
Scribus-Dividus—Scribers, Dividers, Calipers, Wiggler. Nork Products Co., Los Angeles, Calif.
Scrugun—Automatic Screw Driver. Black & Decker Mfg. Co., Towson, Md.
S.D.T. Freeze Proof—Coils. John J. Nesbitt, Inc., Philadelphia, Pa.
S-E—Gravity Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Sea Lion—Leather Belting. Chicago Belting Co., Chicago, Ill.
Seal Master—Bearings. Stephens-Adamson Mfg. Co., Aurora, Ill.
Seal of Quality—Roofing. Columbia Steel Co., San Francisco, Calif.
Seal-Tite—Registers. Char-Gale Mfg. Co., Minneapolis, Minn.
Seamless—Furnaces. Waterman-Waterbury Co., Minneapolis, Minn.
Seasonmaker—Air Conditioning Units, Evaporative Coolers. McQuay, Inc., Minneapolis, Minn.
Security—Caulking Compounds and Felt Roofing. National Mfg. Corp., Tonawanda, N. Y.
Selectair—Air Conditioning Units and Oil Furnaces. S. T. Johnson Co., Oakland, Calif.
Selectric—Storage Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
Sells—Bearings. Royersford Foundry & Machine Co., Royersford, Pa.
Seneca—Furnaces. American-Standard Corp., Pittsburgh, Pa.
Sensatherm—Thermostats. Mercoid Corp., Chicago, Ill.
Sensitrol—Electrical Relays. Weston Electrical Instrument Corp., Newark, N. J.
Sentinel—Floor Furnaces. Stoker-Lad Co., Tacoma, Wash.
Sentinel—Water Heaters. General Water Heater Corp., Burbank, Calif.
Sentry—Barometric Dampers, Tank Gauges. Krueger Sentry Gauge Co., Green Bay, Wis.
Sentry—Furnaces. Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Service-Master—Truck Bodies. McCabe Powers Auto Body Co., St. Louis, Mo.
Sette—Fuel Oil Filters. Marquart Mfg. Co., Oakland, Calif.
SGP—Gas Conversion Burners. Security Mfg. Co., Kansas City, Mo.
Shallo-Well—Floor Furnace. Oran Co., Columbus, Ohio.
Shawburnize—Gas Conversion Burners. Central States Mfg. Co., Inc., Arkansas City, Kansas.
Shawnee—Furnaces. American-Standard Corp., Pittsburgh, Pa.
Shelby—Tubing. National Tube Co., Pittsburgh, Pa.
Shelhed—Oil Burners. Metromatic Mfg. Co., Everett, Mass.
Shield-Arc—Electrodes and Welders. Lincoln Electric Co., Cleveland, Ohio.
Shock Absorbing—Pillow Blocks. Triangle Mfg. Co., Oshkosh, Wis.
Shorty—Furnaces. John Zink Co., Tulsa, Okla.
Shower-Proof—Paint. Calbar Paint & Varnish Co., Philadelphia, Pa.
Shut-O-Vent—Louvers and Shutters. Reed Unit-Fans, Inc., New Orleans, La.
Sierra Air—Evaporative Coolers. International Sales Co., San Francisco, Calif.
Sievert—Soldering Furnaces and Torches. J. A. Sanders, Fulton, N. Y.
Sil-Flux—Flux. United Wire & Supply Corp., Providence, R. I.
Sil-Fos—Solder. Handy & Harman, New York, N. Y.
Silbond—Electrodes. Universal Welder Corp., Cleveland, Ohio.
Silent—Blowers. Air Conditioning Equipment Co., Minneapolis, Minn.
Silent—Furnaces. Jacob Brenner Co., Fond du Lac, Wis.
Silent-glow—Oil Burners. Caloroil Burners Corp., Hartford, Conn.
Silent Korth—Oil Burners. Eckhart Mfg. Co., Inc., Union, N. J.
Silent Star—Oil Burners. Mechanical Products Co., Seattle, Wash.
Silentblu—Gas Burners. Beck Engineering Combustion Kompany, St. Louis, Mo.
Silentvane—Blowers. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Silicon Bronze—Bolts. Chase Brass & Copper Co., Inc., Waterbury, Conn.
Siloo—Fuel Oil Tank Solvent. Petroleum Solvents Corp., New York, N. Y.
Siloy-Soder—Solder. L. B. Allen Co., Inc., Chicago, Ill.
Silver-Soder—Solder. L. B. Allen Co., Inc., Chicago, Ill.
Silver Steel—Band Saw and Hack Saw Blades. E. C. Atkins & Co., Indianapolis, Ind.
Simplex—Flashing. Keystone Flashing Co., Philadelphia, Pa.
Sim-trol—Barometric Dampers. Simplex Mfg. Co., Fond du Lac, Wis.
Single-Ten—Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.
Sioux—Drills, Grinders, Sanders. Albertson & Co., Inc., Sioux City, Iowa.
Sirocco—Air Conditioning Units, Blowers, Washers. American Blower Corp., Detroit, Mich.
S. I. S.—Cement. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
Sisalation—Reflective Insulation. Sisalkraft Co., Chicago, Ill.
S-L—Bar Folders, Nibblers, Slitting Machines. St. Louis Tool Co., St. Louis, Mo.
Slo-Speed—Motors. Sterling Electric Motors, Inc., Los Angeles, Calif.
Smith's—Cleat Benders. R. E. Smith, Waukegan, Ill.
Smithway—Water Storage Heaters, Stokers, Welders. A. O. Smith Corp., Milwaukee, Wis.

Smithway-Burkay—Gas Conversion Burners. A. O. Smith Corp., Toledo, Ohio.
Smoothlite—Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.
S-N—Air Conditioning Units, Furnaces, Oil Burners. Scott-Newcomb, Inc., St. Louis, Mo.
Snap Action—Humidifier Valves. McDonnell & Miller, Inc., Chicago, Ill.
Snap-Lock—Clamp Pliers. Seymour Smith & Son, Inc., Oakville, Conn.
Snap-Rite—Ducts, Pipe and Fittings. Gray Metal Products, Inc., Rochester, N. Y.
Snaplok—Furnace Pipe. Reeves Steel & Mfg. Co., Dover, Ohio.
Snaptite—Gutter Fittings. Berger Mfg. Div., Republic Steel Corp., Canton, Ohio.
Sno-Breze—Evaporative Coolers. Palmer Mfg. Corp., Phoenix, Ariz.
Sno-Fluf—Evaporative Cooler Mats. Palmer Mfg. Corp., Phoenix, Ariz.
So Salts—Flux. Turco Products, Inc., Los Angeles, Calif.
Soder—Solder. L. B. Allen Co., Inc., Chicago, Ill.
Sod-R-Braze—Soldering Torches. National Cylinder Gas Co., Chicago, Ill.
Softweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
Sol-Flux—Soldering Flux. Klem Chemical Works, Dearborn, Mich.
Solair—Heat Pump. Northwest Heating, Inc., Portland, Ore.
Sola-Flame—Oil Burners. East Coast Co., Boston, Mass.
Solar Flame—Oil Burners. United States Radiator Corp., Detroit, Mich.
Solaraire—Air Conditioning Furnace. St. Louis Furnace Mfg. Co., St. Louis, Mo.
Solder-Matic—Soldering Iron Attachment. Nelpin Mfg. Co., Long Island City, N. Y.
Solderprep—Flux for Steel. Neilson Chemical Co., Detroit, Mich.
Solex—Heat Insulating Windows. Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Sonoairduct—Non-metallic Ducts. Sonoco Products Co., Hartsville, S. C.
Sonolastic—Asphalt Paint. L. Sonneborn Sons, Inc., New York, N. Y.
Sootracide—Soot Remover. Metropolitan Refining Co., Inc., Long Island City, N. Y.
Soroco—Chimney Caps and Tops. Southbridge Roofing Co., Inc., Southbridge, Mass.
South Wind—Furnaces. Stewart-Warner Corp., South Wind Div., Indianapolis, Ind.
Southaire—Pipe Fittings, Stokers, Furnaces. E. E. Souther Iron Co., St. Louis, Mo.
Southern-Aire—Space Heaters. Southern Aircraft Co., Garland, Tex.
Spacesaver—Suspended Furnaces. Payne Furnace Div., Affiliated Gas Equipment Inc., Monrovia, Calif.
Spartan—Water Heaters. Continental Water Heater Co., Ltd., Los Angeles, Calif.
Special X—Flux. Industrial Service Laboratories, Milwaukee, Wis.
Speco—Soldering Flux. Pfanstiehl Chemical Co., Waukegan, Ill.
Spee Dee—Coils. Air Controls, Inc., Cleveland, Ohio.
Speed Clamps—Sheet Metal Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.
Speed Clips—Spring Steel Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.
Speed Grips—Sheet Metal Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.
Speed-heat—Furnaces. Marshall Furnace Co., Marshall, Mich.
Speed Nuts—Sheet Metal Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.
Speed-Trol—Transmissions, Motors, Sterling Electric Motors, Inc., Los Angeles, Calif.
Speedmaster—Water Heaters. Handley-Brown Heater Co., Jackson, Mich.
Speedomax—Recorders. Leeds & Northrup Co., Philadelphia, Pa.
Speedweld—Welding Electrodes. Trindl Products, Ltd., Chicago, Ill.
Sphinx—Gas Burners and Furnaces. C. L. Bryant Corp., Cleveland, Ohio.
Sphinxette—Gas Burners and Furnaces. C. L. Bryant Corp., Cleveland, Ohio.
Spinner—Ventilators. Inland Steel Products Co., Milwaukee, Wis.
Spiralok—Pulleys. Scientiae Tool Co., Dayton, Ohio.
Spiratube—Flexible Duct Connections and Non-Metallic Fittings. Flexible Tubing Corp., Guilford, Conn.
Spirovane—Fans. Western Blower Co., Seattle, Wash.
Spongex—Vibration Isolating Pads. Sponge Rubber Products Co., Shelton, Conn.
Spot-Aire—Room Type Air Conditioning Units. Drayer-Hanson, Inc., Los Angeles, Calif.
Spra-Rite—Nozzles. Binks Mfg. Co., Chicago, Ill.
Spraco—Spray Guns, Humidifiers, Nozzles, Air Washers. Spray Engineering Co., Somerville, Mass.
Sprague—Furnaces. Katelman Foundry & Mfg. Co., Council Bluffs, Iowa.
Spray-Acoustic—Insulation. Sprayo-Flake Co., Chicago, Ill.
Spray-Cote—Insulation. Sprayo-Flake Company, Chicago, Ill.
Sprayit—Paint Guns. Electric Sprayit Co., Sheboygan, Wis.
Spraymaster—Paint Spray Guns. Portable Electric Tools, Inc., Chicago, Ill.
Spraywelder—Metal Spray Guns. Wall Colmonoy Corp., Detroit, Mich.
Spray Wheel—Evaporative Coolers. Mountain States Equipment Co., Denver, Colo.
Springin—Toggle Bolts. Star Expansion Bolt Co., New York, N. Y.
Spunsteel—Pulleys. Spun Steel Corporation, Canton, Ohio.
S.R.P. 75—Sheet Metal Paint. L. Sonneborn Sons, Inc., New York, N. Y.
S.R.P. 87—Sheet Metal Paint. L. Sonneborn Sons, Inc., New York, N. Y.
Ssirco—Cutter and Accessories, Ridge Roll, Roofing, Metal Shingles and Tile. Southern States Iron Roofing Co., Savannah, Ga.
ST-type—Gas Burner Pilots. John Zink Co., Tulsa, Okla.
Sta-Lok—Prefabricated Ducts and Duct Fittings. Chicago Furnace Supply Co., Chicago, Ill.
Sta-Steel—Soldering Flux. London Chemical Co., Chicago, Ill.
Stable-Arc—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
Stack-O-Meter—CO_2 Analyzer. Davis Emergency Equipment Co., Newark, N. J.
Stackmaster—Furnace Regulator. Campbell Eng. Co., Appleton, Wis.
Stainlend—Electrodes. Arcos Corp., Philadelphia, Pa.
Stainless 20—Stainless Clad Sheets. Lukens Steel Co., Coatesville, Pa.
Stainaloy—Electrodes. Acme Electric Welder Co., Los Angeles, Calif.
Stainweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
Stamco—Furnace Pipe, Fittings. Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
Standard—Roof Ventilators. Burt Mfg. Co., Akron, Ohio.
Standard—Furnace. Farris Furnace Co., Springfield, Ill.
Standard—Furnaces. Home Furnace Co., Holland, Mich.
Standard—Furnaces. Williamson Heater Co., Cincinnati, Ohio.
Standard I.F.B.—Combustion Chambers. A. P. Green Fire Brick Co., Mexico, Mo.
Standard Stationary—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.
Standforated—Grilles. Standard Stamping & Perforating Co., Chicago, Ill.
Stanflame—Gas Burners. American Standard, Pittsburgh, Pa.
Star—Hack Saw Blades. Clemson Bros., Inc., Middletown, N. Y.
Star—Oil Burners. Mechanical Products Co., Seattle, Wash.
Stark—Furnaces. Hess-Snyder Co., Massillon, Ohio.
Statick—Ventilators. Hirschmann-Pohle Co., Inc., LeRoy, N. Y.
Staxausters—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.
Staynew—Air Filters. Dollinger Corp., Rochester, N. Y.
Steel-Bound Cork—Vibration Isolating Pads. Korfund Co., Inc., Long Island City, N. Y.
Steel Cable—V-Belts. Goodyear Tire & Rubber Co., Inc., Akron, Ohio.
Steel City—Furnaces. Ruby Management Co., Pittsburgh, Pa.
Steel-Fin—Heating Coils. New York Blower Co., Chicago, Ill.
Steel Weld—Furnaces. Jacob Brenner Co., Fond du Lac, Wis.
Steelco—Gutter Guards. Steele Mfg. Co., Ashland, Ky.
Steelfab—Squaring Shears & Presses. Highland Engineering Co., Santa Monica, Calif.
Steelweld—Sheet Metal Working Machinery. Cleveland Crane & Engineering Co., Wickliffe, Ohio.
Sterilator—Germicidal Lamps. Domestic Devices, Cleveland, Ohio.
Sterling—Evaporative Coolers and Compressors. Reynolds Mfg. Co., Springfield, Mo.
Sterling Beader—Beading Machines. F. L. Robertson, Buffalo, N. Y.
Steward—Brakes, Benders. Ward Machinery Co., Chicago, Ill.
Stic-Tite—Cement. Refractory & Insulation Corp., New York, N. Y.
Stok-A-Fire—Furnaces, Stokers. Automatic Firing Corporation, St. Louis, Mo.
Stok-A-Timer—Stoker Controls. Mercoid Corp., Chicago, Ill.
Stokabilt—Air Conditioning Stoker Furnaces. American Foundry & Furnace Co., Bloomington, Ill.
Stoker-Disk—Baffles. Insulation & Refractories Co., Williamson, N. Y.
Stokerator—Domestic Stokers. Northern Steel & Stoker Corp., Peoria, Ill.
Stokerelay—Relays. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Stokerett—Domestic Stokers. Worsham Co., Inc., Long Beach, Calif.
Stokol-Hydraulic—Stokers. Stokol Stoker Co., Inc., Dayton, Ohio.
Stokol-Mercury—Stokers. Stokol Stoker Co., Inc., Dayton, Ohio.
Stonewall—Asbestos-Cement Board. Ruberoid Co., New York, N. Y.

Stop-It—Waterproofing. Tamms Industries Inc., Chicago, Ill.
Storm-Pruf—Oil Burner Vent Caps. Bearlee Products Co., Green Bay, Wis.
Stormseal—Sheet Metal Roofing. American Steel & Wire Co., Cleveland, Ohio; Columbia Steel Co., San Francisco, Calif.; U. S. Steel Co., Pittsburgh, Pa.
Stormtight—Roof Cement and Paint. L. Sonneborn Sons, Inc., New York, N. Y.
Stowaway—Suspended Furnaces. Lennox Furnace Co., Marshalltown, Iowa.
Strato Cap—Roof Ventilators. Ryniker Steel Products Co., Billings, Mont.
Strato-Liminator—Air Diffusers. Wilster, Inc., Cleveland, Ohio.
Streamjet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.
Streamline—Ridge Ventilators. H. H. Robertson Co., Pittsburgh, Pa.
Streamline—Copper Tubing and Fittings. Mueller Brass Co., Port Huron, Mich.
Streamlined—Combustion Chambers. A. P. Green Fire Brick Co., Mexico, Mo.
Streamlined—Oil Burners. Shedlov Oil Burners, Inc., Minneapolis, Minn.
Streamliner—Directional Flow Registers. Auer Register Co., Cleveland, Ohio.
Streekno—Register Packing. Excel Heating & Air Conditioning Co., Chicago, Ill.
Strongbarn—Corrugated Steel Roofing. Granite City Steel Co., Granite City, Ill.
Stronghold—Nails. Independent Nail & Packing Co., Bridgewater, Mass.
Stubby—Floor Furnace. Holly Mfg. Co., Pasadena, Calif.
Stud-Pak—Insulation. United States Mineral Wool Co., South Milwaukee, Wis.
Sturdybender—Presses, Brakes. Cyril Bath & Co., Cleveland, Ohio.
Styx—Roof Cement. Coopers Creek Chemical Corp., West Conshohocken, Pa.
Sue-Per—Water Heaters. Southwestern Heater Corp., Dallas, Texas.
Sun Blaze—Furnaces. Harvey-Whipple, Inc., Springfield, Mass.
Sun-Burst—Furnaces. Delta Heating Corp., Trenton, N. J.
Sun Fuel Master—Furnaces. J. V. Patten Co., Sycamore, Ill.
Sunburst—Gas Burners. Taylor Appliance & Mfg. Co., Royal Oak, Mich.
Super—Drill Grinders. Crandall Mfg. Co., Los Angeles, Calif.
Super—Hangers and Fittings. Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.
Super—Heaters. Evans Products Co., Detroit, Mich.
Super—Plastic Furnace Lining. Walsh Refractories Corp., St. Louis, Mo.
Super Cycle—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.
Super Firma—Gravity Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Super-Heat—Gas Burners. Brown-Hart Engineering Corp., Hazel Park, Mich.
Super-Jet—Soldering Torches. Fusion Engineering, Cleveland, Ohio.
Super-Por-Seal—Waterproofing. Truscon Laboratories, Detroit, Mich.
Super Red Streak—Furnace Cleaners. National Super Service Co., Inc., Toledo, Ohio.
Super Saw—Power Saws. RCS Tool Sales Corp., Joliet, Ill.
Super Sioux—Ventilators. Sioux Steel Co., Sioux Falls, S. D.
Super 66—Insulation. Eagle-Picher Co., Cincinnati, Ohio.
Super Slugger—Electric Power Hammers. Noble & Stanton, Inc., Bedford, Ohio.
Super Speed—Mouldings and Trim. Appleton Supply Co., Inc., Appleton, Wis.
Super-Spred—Stokers. Wm. Bros Boiler & Mfg. Co., Minneapolis, Minn.
Super Steel—Furnaces. Williamson Heater Co., Cincinnati, Ohio.
Super-Thermo Stucco—Combustion Chambers Refractories. Chicago Fire Brick Co., Chicago, Ill.
Super-Vacuum—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.
Super-X—Roofing Nails. Republic Steel Corp., Cleveland, Ohio.
Super X—Sheets. Western Brass Mills Div., Olin Industries, Inc., East Alton, Ill.
Superair—Air Conditioning Furnaces. St. Louis Furnace Mfg. Co., St. Louis, Mo.
Superdraft—Blowers. Perfection Stove Co., Cleveland, Ohio.
Superfelt—Insulation. Johns-Manville, New York, N. Y.
Superfin—Furnaces. American Fdry. & Furnace Co., Bloomington, Ill.
Superflame—Blowers, Gas Burners and Furnaces. Queen Stove Works, Inc., Albert Lea, Minn.
Superflux—Soldering Flux. Paul-Lewis Laboratories, Inc., Milwaukee, Wis.
Superhot—Water Heaters. SuperbO Mfg. Co., Los Angeles, Calif.
Superior—Enamels. Blue Ridge Talc Co., Inc., Henry, Va.
Superior—Blowers. American Foundry & Furnace Co., Bloomington, Ill.
Superior—Storage Water Heaters. Bastian-Morley, Inc., LaPorte, Ind.
Superior—Water Heaters. Crane Co., Chicago, Ill.
Superloy—Electrodes. Acme Electric Welder Co., Los Angeles, Calif.
Supermetic—Compressors. Servel, Inc., Evansville, Ind.
Supersteel—Furnaces. Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
Supertemp—Insulation. Eagle-Picher Co., Cincinnati, Ohio.
Supreme—Combustion Chambers. Sandberg Mfg. Co., Portland, Ore.
Supreme—Enamels. Blue Ridge Talc Co., Inc., Henry, Va.
Supreme—Furnaces, Heaters. Agricola Furnace Co., Inc., Gadsden, Ala.
Supreme—Space Heaters. Independence Stove & Mfg. Co., Independence, Mo.
Supreme—Furnaces. McPherson Furnace & Supply Co., Portland, Ore.
Sure Draft—Chimney Tops. H. C. Little Burner Co., Inc., San Rafael, Calif.
Sure-Foot—Ladder Base. Akron Steel Sales, Inc., Akron, Ohio.
Surefit—Ducts, Fittings, Furnace and Smoke Pipe, and Fittings. Henry Furnace Co., Medina, Ohio.
Surety—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.
Sureweld—Welding Electrodes, Welders. National Cylinder Gas Co., Chicago, Ill.
Surfaceweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
SuVeneer—Clad Sheets. Superior Steel Corp., Pittsburgh, Pa.
Swanee—Galvanized Shingles. Berger Mfg. Div., Republic Steel Corp., Canton, Ohio.
Sylphon—Thermostats. Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Knoxville, Tenn.
Symentrex—Waterproofing. A. C. Horn Co., Inc., Long Island City, N. Y.
Symonds—Registers. Front Rank Furnace Co., Div., Liberty Foundry Co., St. Louis, Mo.
Synchron—Stoker Controls, Relays, Switches. Industrial Engineering Corp., Terre Haute, Ind.
Syncrogear—Motors. U. S. Electrical Motors, Inc., Los Angeles, Calif.

T

Table-Top—Water Heaters. Handley-Brown Heater Co., Jackson, Mich.
Tag—Controls, Hygrometers, Recorders, Psychrometers, Thermometers. Weston Electrical Instrument Corp., Newark, N. Y.
Tam-Putty—Caulking Compound. Tamms Industries Inc., Chicago, Ill.
Tamanite—Metal Conditioner. Tamms Industries Inc., Chicago, Ill.
Tamco—Ventilators. Tiffin Art Metal Co., Tiffin, Ohio.
Tamtex—Paint. Tamms Industries Inc., Chicago, Ill.
Tank-Kleen—Solvent. Celco Corp., New York, N. Y.
Taperlock—Fan & Motor Pulleys. Dodge Mfg. Corp., Mishawaka, Ind.
Tapgun—Portable Electric Tapper. Black & Decker Mfg. Co., Towson, Md.
Tarbestos—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.
Teejet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.
Tee Joint—Pipe Fittings and Accessories. Inland Steel Products Co., Milwaukee, Wis.
Teg Conditioner—Blower-Filter Units. National Air Conditioning, Inc., Johnstown, Pa.
Teletrol—Controls. Airgard Mfg. Co., Chicago, Ill.
Tel-Tru—Psychrometers, Thermometers, Air Testing Instruments. E. Vernon Hill & Co., Chicago, Ill.
Tem-Clock—Clock Thermostats. Penn Controls, Inc., Goshen, Ind.
Temlok—Insulation. Armstrong Cork Co., Lancaster, Pa.
Tempmaster—Thermostats. Crown Controls Co., Inc., New Bremen, Ohio.
Tempoint—Thermometer. Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Tempotool—Powder Operated Drills. Tempo Products Co., Cleveland, Ohio.
Tempscribe—Portable Temperature Recorder. Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Tenneseal—Sheet Metal Roofing. Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
Tensilend—Electrodes. Arcos Corp., Philadelphia, Pa.
Tension-Lap—Roofing Steel. Inland Steel Co., Chicago, Ill.
Tensulate—Insulation, Tennessee Products & Chemical Corp., Nashville, Tenn.
TePee—Burners, Furnaces, Water Heaters. Thermo-Products, Inc., North Judson, Ind.
Tergitol—Cleaning Compounds. Carbide & Carbon Chemicals Co., Div. Union Carbide & Carbon Corp., New York, N. Y.
Texamo—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
Texan—Water Heaters. Hotstream Heater Co., Cleveland, Ohio.
Texrope—V-Belts. Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Tharco—Furnace Cement. The Armstrong Co., Detroit, Mich.
Thermalfuel—Furnaces. Beck Engineering Combustion Co., St. Louis, Mo.
Thermalite—Paint. Tropical Paint & Oil Co., Cleveland, Ohio.
Thermaload—Electrical Relays. Monitor Controller Co., Boston, Mass.

Thermaster—Furnaces. Thatcher Furnace Co., Garwood, N. J.

Thermatube—Duct Fittings. Flexible Tubing Corp., Guilford, Conn.

Thermidaire—Air Conditioning Units, Blowers, Coils, Fans, Furnaces, Louvres & Shutters. E. K. Campbell Co., Kansas City, Mo.

Thermo—Furnaces. American Furnace Co., St. Louis, Mo.

Therm-o-glo—Insulating Cement. National Fuel Conservation Co., Inc., White Plains, N. Y.

Thermo-Draulic—Damper Motors. Perfex Corp., Milwaukee, Wis.

Thermo-Drip—Humidifier. Automatic Humidifier Co., Cedar Falls, Iowa.

Thermo-Grip—Soldering Torches, Soldering Coppers. Ideal Industries, Inc., Sycamore, Ill.

Thermo-Humidigraph—Humidity Recorders. Bristol Co., Waterbury, Conn.

Therm-otrol—Thermometers. Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.

Thermo Lo—Brazing Flux. Farrelloy Co., Philadelphia, Pa.

Thermo-Blast—Furnaces, Gas & Oil Burners. Rapid Heat Corp., Detroit, Mich.

Thermoanemometer—Anemometer, Willson Products, Inc., Reading, Pa.

Thermobloc—Furnaces. Prat-Daniel Corp., South Norwalk, Conn.

Thermodrive—Blower Controls. Webster Electric Co., Racine, Wis.

Thermodulor—Controls. Carvell Heat Equipment Co., Los Angeles, Calif.

Thermogas—Furnaces. Beck Engineering Combustion Kompany, St. Louis, Mo.

Thermoil—Furnaces. Beck Engineering Combustion Kompany, St. Louis, Mo.

Thermoil-Granodine—Coating Chemical for Steel or Iron Surfaces. American Chemical Paint Co., Ambler, Pa.

Thermolux—Water Heaters. Los Angeles Gas Appliance Co., Los Angeles, Calif.

Thermopane—Windows. Libby-Owens-Ford Glass Co., Toledo, Ohio.

Thermopilot—Controls. General Controls Co., Glendale, Calif.

Thermoseal—Insulating Windows. F. C. Russell Co., Cleveland, Ohio.

Thermotex B—Insulating Cement, Waterproofing. Philip Carey Mfg. Co., Cincinnati, Ohio.

Thermotite—Insulation. Coast Insulating Products, Los Angeles, Calif.

Thin-Man—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

Thor—Electric and Pneumatic Buffers, Nibblers, Hoists, Hammers, Tools. Independent Pneumatic Tool Co., Aurora, Ill.

3-M—Electric Grinders, Buffers, etc. Minnesota Mining & Mfg., Co., St. Paul, Minn.

Three-Phase—Welders. Sciaky Bros., Chicago, Ill.

370 Special—Paints. Thompson & Co., Oakmont, Pa.

Thrift—Time Switches. Tork Clock Co., Inc., Mt. Vernon, N. Y.

Thulman—Prefabricated Chimneys. Chimney Sales Corp., Fredericksburg, Va.

Thunder-Core—Hammer bits. New England Carbide Tool Co., Cambridge, Mass.

Thunder-Twist—Carbide Tipped Bits, Chuck Wrenches. New England Carbide Tool Co., Cambridge, Mass.

Ti-Namel—Vitreous Enameling Alloy Steel Sheets. Inland Steel Co., Chicago, Ill.

Tik Wheat—Pipe Covering Paste. Clark Stek-O Corp., Rochester, N. Y.

Tillery's—Furnace Clock. Little Janitor Furnace Clock Co., New York, N. Y.

Time-O-Switch—Time Switches. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Timercoid—Time Switches. Mercoid Corp., Chicago, Ill.

Timerelay—Relays. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Tinezy—Solder. Farrelloy Co., Inc., Philadelphia, Pa.

Tinner's Red—Paint. Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Tinol—Soldering Flux. American Solder & Flux Co., Philadelphia, Pa.

Tite-Lite—Caulking Compound. Truscon Laboratories, Detroit, Mich.

Titelock—Fittings and Accessories for Conductor, Gutter, Furnace Pipe. Inland Steel Products Co., Milwaukee, Wis.

TiteSeal—Oil Burner Tank Solvent. Radiator Specialty Co., Charlotte, N. C.

Toastmaster—Electric Water Heaters. McGraw Electric Co., Clark Div., Chicago, Ill.

Tobin Bronze—Plates and Welding Rod. American Brass Co., Waterbury, Conn.

Tocoseal—Roof Cement. Tropical Paint & Oil Co., Cleveland, Ohio.

Toledo—Presses and Dies. E. W. Bliss Company, Canton, Ohio.

Toolarc—Welding Electrodes. Universal Welder Corp., Cleveland, Ohio.

Toolmaster—Grinders. Brown-Brockmeyer Co., Dayton, Ohio.

Toolweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.

Torchweld—Torches. National Cylinder Gas Co., Chicago, Ill.

Toridaire—Furnaces. Fraser and Johnston Co., San Francisco, Calif.

Toridmaster—Conversion Burners. Modern Controls Corporation, Centerline, Mich.

Torkmaster—Switches. Tork Clock Co., Inc., Mt. Vernon, N. Y.

Torkotherm—Thermostats. Tork Clock Co., Inc., Mt. Vernon, N. Y.

Tornado—Furnace Vacuum Cleaners. Breuer Electric Mfg. Co., Chicago, Ill.

Torrid Zone—Furnaces. Lennox Furnace Co., Marshalltown, Iowa.

Totalume—Aluminum Paint. Wilbur & Williams Co., Brighton, Mass.

Totrust—Paints, Enamels. Wilbur & Williams Co., Brighton, Mass.

Town & Country—Air Conditioning Units, Furnaces. Conco Engineering Works, Mendota, Ill.

Tramrail—Hoists, Cranes, Monorails. Cleveland Crane & Engineering Co., Wickliffe, Ohio.

Transite—Asbestos Cement Board, Pipe and Fittings. Johns-Manville, New York, N. Y.

Transite Conduit—Ducts and Duct Fittings. Johns-Manville, New York, N. Y.

Transite Korduct—Ducts and Duct Fittings. Johns-Manville, New York, N. Y.

Transparent—CO_2 Analyzers. F. W. Dwyer Mfg. Co., Chicago, Ill.

Trapit—Fuel Oil Filters. A-P Controls Corp., Milwaukee, Wis.

Trentweld—Steel Tubing. Crucible Steel Co. of America, New York, N. Y.

Tri-Rib—Steel Roof Deck. Wheeling Corrugating Co., Wheeling, W. Va.

Tri-Core—Solder. Alpha Metals, Inc., Jersey City, N. J.

Tri-Flex—Grilles, Registers. Tuttle & Bailey, Inc., New Britain, Conn.

Tri-Flux—Soldering Flux. Wolfe-Kote Co., Sheboygan, Wis.

Tri-Snips—Multi-purpose Snips. Roto-Table Co., Dayton, Ohio.

Triangle—Water Heaters. Day & Night Div., Affiliated Gas Equipment Co., Inc., Monrovia, Calif.

Tribloc—Hoists. Ford Chain Block Div., American Chain and Cable Co., Inc., York, Penn.

Triclene—Metal Cleaner. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

Trico—Draft Diverters, Furnaces. Tri-State Heating Supply Inc., Fort Wayne, Ind.

Trimatic—Gas Burner Pilots. Lowell & Grayson Mfg. Co., Monrovia, Calif. Appleton, Wis.

Tripl-Lock—Roofing Nails. The Deniston Co., Chicago, Ill.

Tripl-ife—Furnaces. Williamson Heater Co., Cincinnati, Ohio.

Triple A—Paints. Quigley Co., Inc., New York, N. Y.

Triple-Lok—Parker Appliance Co., Cleveland, Ohio.

Triumph—Space Heaters. Independence Stove & Mfg. Co., Independence, Mo.

Triumph—Water Heaters. Koil-Les Heater Co., Geneva, Ill.

Tro-Laire—Wall Furnaces. A & B Mfg. Co., San Francisco, Calif.

Tropicalk—Caulking Compounds. Tropical Paint & Oil Co., Cleveland, Ohio.

Tropic Breeze—Furnaces. Dalzen Mfg. Co., St. Clair, Mich.

Truflex—V Belts. Gates Rubber Co., Denver, Colo.

Truliradiant—Gas Burners. Sullivan Valve & Engineering Co., Butte, Mont.

Trunkline—Ducts and Duct Fittings. Norwalk Air Conditioning Corp., South Norwalk, Conn.

Trussteel—Damper Clips. U. S. Register Co., Battle Creek, Mich.

Tub-Tite—Caulking Compound. American Fluresit Co., Cincinnati, Ohio.

Tube-O-Flux—Flux, Solder. American Products Corp., Chicago, Ill.

Tuf-Flex—Hack Saw Blades. Millers Falls Co., Greenfield, Mass.

Tuffaloy—Electrodes. Welding Sales & Engineering Co., Detroit, Mich.

Tungsweld—Shear Baldes. Simonds Saw & Steel Co., Fitchburg, Mass.

Turb-O-Tube—Furnace. Associates Engineering Co., Buffalo, N. Y.

Turbine Rotary—Ventilators. Western Engineering & Manufacturing Co., Los Angeles, Calif.

Turbo—Air Washers. Bayley Blower Company, Milwaukee, Wis.

Turbovane—Blowers. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

Twecotong—Electrode Holders. Tweco Products Co., Wichita, Kan.

Twin Contact—Controls. Perfex Corp., Milwaukee, Wis.

Twin-Eight—Space Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.

Twin-Fyr—Oil Burner. Breeze Corps., Inc., Newark, N. J.

Twin Rail—Fan and Motor Base. Korfund Co., Inc., Long Island City, N. Y.

Twindow—Heat Insulating Windows. Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Two-Drain—Steel Roofing. Inland Steel Products Co., Milwaukee, Wis.

Two-Tank-T—Fuel Filters. Robert Barclay Co., Chicago, Ill.

Tygon—Metal Protecting Paint. U. S. Stoneware Co., New York, N. Y.

Tyl-Lyke—Steel Roofing and Siding. Continental Steel Corp., Kokomo, Ind.

Tymotherm—Thermostats. Tork Clock Company, Inc., Mount Vernon, N. Y.

Type X—Stainless Cleaner. Turco Products, Inc., Los Angeles, Calif.

U

U-Loy—Copper Bearing Steel Sheets. Republic Steel Corp., Cleveland, Ohio.

U-Set—Snips and Shears. W. H. Compton Shear Co., Newark, N. J.

U Tube—Water Heaters. Handley Brown Heater Co., Jackson, Mich.

Ucilon—Sheet Metal Paint. United Chromium, Inc., New York, N. Y.

U-G-L—Furnace Cement. United Gilsonite Laboratories, Scranton, Pa.

Ultralite—Duct and Furnace Insulation. Gustin-Bacon Mfg. Co., Kansas City, Mo.

UMCO—Furnaces. Union Mfg. Co., Boyertown, Pa.

Uni-Flo—Grilles, Registers & Air Diffusers. Barber-Colman Co., Rockford, Ill.

Uni-Tile—Combustion Chambers. Insulation & Refractories Co., Williamson, N. Y.

Uni-wash—Blow Pipe Collectors. Newcomb-Detroit Co., Detroit, Mich.

Unichrome—Sheet Metal Paint. United Chromium, Inc., New York, N. Y.

Uniclosed—Motors. U. S. Electrical Motors, Inc., Los Angeles, Calif.

Unicoil—Air Conditioning Units. Clarage Fan Co., Kalamazoo, Mich.

Unicon—Refrigerating Condensers. Kramer Trenton Co., Trenton, N. J.

Unifil—Insulation. Robinson Insulation Co., Great Falls, Mont.

Uniflare—Copper Tube Fittings. Scovill Mfg. Co., Waterville Div., Waterville, Conn.

Uniloy—Stainless Steel Sheets. Universal-Cyclops Steel Corp., Bridgeville, Pa.

Unipack—Blowers, Exhausters. American Machine Products Co., Marshalltown, Iowa.

Unishear—Portable Electric Shears. Stanley Electric Tool Div., Stanley Works, New Britain, Conn.

Unisorb—Bases and Pads. Felters Co., Boston, Mass.

Unitaire—Air Conditioning Units. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

Unitaire—Gas Furnaces. Hammel Radiator Eng. Co., Los Angeles, Calif.

Unitherm—Air Conditioning Units. Clarage Fan Co., Kalamazoo, Mich.

UniTrane—Air Conditioning Units. Trane Co., LaCrosse, Wis.

Universal—Angle Benders. Hossfeld Mfg. Co., Winona, Minn.

Universal—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.

Universal—Waterproofing. Philip Carey Mfg. Co., Cincinnati, Ohio.

Unxld—Duct Damper Regulators. Parker-Kalon Corp., New York, N. Y.

Upson—Rivets. Republic Steel Corp., Cleveland, Ohio.

usAIRco—Air Conditioning Units, Blowers and Blower-Filter Units, Coils, Fans, Grilles, and Blower Wheels. U. S. Air Conditioning Corp., Minneapolis, Minn.

U. S.—Oil Burner. Carlin Co., Wethersfield, Conn.

USG—Built-Up Roofing and Roof Cement and Paint. United States Gypsum Co., Chicago, Ill.

USRC—Registers, Damper Regulators. U. S. Register Co., Battle Creek, Mich.

U.S.S.—Steel Products. American Steel & Wire Co., Cleveland, Ohio; Columbia Steel Co., San Francisco, Calif.; National Tube Co., Pittsburgh, Pa.; Tennessee Coal and Iron Div., Fairfield, Ala.; U.S. Steel Co., Pittsburgh, Pa., Subs. U.S. Steel Corp., Pittsburgh, Pa.

Utility—Fan Ventilator. Arex Co., Chicago, Ill.

V

V-Crimp—Roofing. Inland Steel Products Co., Milwaukee, Wis.

V-Drain—Roofing. Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.

V-Vent—Ventilators. Aeolus Dickinson, Chicago, Ill.

Valcalox—Damper Regulators. Young Regulator Co., Cleveland, Ohio.

Valdura—Caulking Compounds, Paint. American-Marietta Co., Chicago, Ill.

Valley Forge—Cement. Ehret Magnesia Mfg. Co., Valley Forge, Pa.

Valvent—Ventilators. Swartwout Co., Cleveland, Ohio.

Vanco—Skylights and Ventilators. E. Van Noorden Co., Boston, Mass.

Vapoglas—Evaporative Humidifiers. Skuttle Mfg. Co., Detroit, Mich.

Vapor-Oil—Burners and Furnaces. Metro Metal Mfg. Co., Holt, Mich.

Vaporaire—Air Conditioners. Penn Boiler & Burner Mfg. Corp., Lancaster, Pa.

Vaporseal—Waterproofing. Angier Corp., Farmingham, Mass.

Vaporite—Humidifiers. Automatic Humidifier Co., Cedar Falls, Iowa.

Vari-Pitch—Speed Changers. Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Varidrive—Motors, Transmissions. U. S. Electrical Motors, Inc., Los Angeles, Calif.

Veelos—V-Belts. Manheim Mfg. & Belting Co., Manheim, Pa.

Velometer—Air Velocity Meters. Illinois Testing Laboratories, Inc., Chicago, Ill.

Ventalarm—Fuel Tank Signal Gauge. Scully Signal Co., Cambridge, Mass.

Ventfab—Flexible Duct Connections. Iden Associates, Chicago, Ill.

Ventglas—Flexible Duct Connections. Iden Associates, Chicago, Ill.

Ventilette—Fans. Diehl Manufacturing Company, Somerville, N. J.

Ventrola—Ventilators, Fans. National Appliance Co., Detroit, Mich.

Ventube—Rubberized Tubing. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

Ventura—Fans, Ventilators. American Blower Corp., Detroit, Mich.

Venturi-Flo—Air Diffusers, Ceiling Ventilators. Barber-Colman Co., Rockford, Ill.

Venturi-Top—Roof Ventilators. Walker Mfg. & Sales Corp., St. Joseph, Mo.

Vermiculite—Insulation. International Vermiculite Co., Girard, Ill.

Vernois—Furnace Repair & Parts. Mt. Vernon Furnace and Mfg. Co., Mt. Vernon, Ill.

Versa-Tool—Portable Electric Drill. York Electric and Machine Co., York, Pa.

Vibra-Cork—Vibration Isolating Bases. Korfund Co., Inc., Long Island City, N. Y.

Vibro-Bars—Vibration Isolating Bases. Korfund Co., Inc., Long Island City, N. Y.

Vibro-Insulators—Vibration Insulating Pads. B. F. Goodrich Co., Akron, Ohio.

Vibro-Isolator—Vibration Isolating Bases. Korfund Co., Inc., Long Island City, N. Y.

Vi-Speed—Pneumatic Hammer. Van Products Co., Erie, Pa.

Victor—Blower-Filter Units, Furnaces, Oil Burners, Stokers. Hall-Neal Furnace Co., Indianapolis, Ind.

Victorgas—Gas Furnaces. Hall-Neal Furnace Co., Indianapolis, Ind.

Victoroil—Oil Furnaces. Hall-Neal Furnace Co., Indianapolis, Ind.

Victory—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

Vigoraire—Furnaces. Marshall Furnace Co., Marshall, Mich.

Vikimatic—Furnaces. Viking Manufacturing Corp., Cleveland, Ohio.

Viking—Welders. Progressive Welder Sales Co., Detroit, Mich.

Vincul—Rust Remover. Protective Coatings, Inc., Detroit, Mich.

Visaflame—Oil Burner Controls. Mercoid Corp., Chicago, Ill.

Vise-Grip—Clamps. Petersen Mfg. Co., Inc., DeWitt, Nebr.

Visi-Draft—Draft Gauge. F. W. Dwyer Mfg. Co., Chicago, Ill.

VitaRay—Space Heaters. Quad Stove Mfg. Co., Columbus, Ohio.

Vitricel—Furnace Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.

Vitro Flame—Oil Burners. Kresno-Stamm Mfg. Co., Palisades Pk., N. J.

Vitroliner—Prefabricated Chimneys, Chimney Linings, Vent and Flue Pipe and Fittings. Condensation Engineering Corp., Chicago, Ill.

Volocitrol—Air Control Vanes. Barber-Colman Co., Rockford, Ill.

Vortex—Oil Burners. Iron Fireman Mfg. Co., Cleveland, Ohio.

Vortex—Spray Nozzles. Phillips Cooling Tower Co., Inc., Brooklyn, N. Y.

Vulcan—Stokers. Canton Stoker Corp., Canton, Ohio.

Vulcanite—Felt Roofing, Roofing Cement. Certain-teed Products Corp., Ardmore, Pa.

Vulcatex—Caulking and Glazing Compounds. A. C. Horn Co., Inc., Long Island City, N. Y.

Vulco—V-Belts and Pulleys. Gates Rubber Co., Denver, Colo.

Vulcomount—Pulleys. Gates Rubber Co., Denver, Colo.

W

W—Sheets. Wheeling Corrugating Co., Wheeling, W. Va.

Warco—Refractories. Walsh Refractories Corp., St. Louis, Mo.

Warco—Presses & Dies. Federal Machine & Welder Co., Warren, Ohio.

Ward Zephyr—Attic Fans. Edgar T. Ward Industries, Inc., Chicago, Ill.

Warmahl—Furnaces. Mahl Mfg. Co., Huntington Park, Calif.

Warmolator—Wall Furnaces, Heaters. Williams Radiator Co., Glendale, Calif.

Washington—Furnaces. Gray & Dudley Co., Nashville, Tenn.

Watco—Spray Nozzles. Water Cooling Corp., New York, N. Y.

Water-Boy—Humidifier Valves. Maid-O'-Mist, Inc., Chicago, Ill.

Water-RAY-trola—Oil-fired Water Heater. Ray Oil Burner Co., San Francisco, Calif.

Waterbase—Furnaces. Farris Furnace Co., Springfield, Ill.

Waterbury—Oil Burners, Ducts and Fittings, Pipe, Pipe Fittings and Accessories, Furnaces, Metal Connectors. Waterman-Waterbury Co., Minneapolis, Minn.

Waterfoil—Waterproofing. A. C. Horn Co., Long Island City, N. Y.

Waterloo Airfoil—Grilles, Louvres, Registers. Titus Manufacturing Corporation, Waterloo, Iowa.

Waterseal—Cement. Thompson & Co., Oakmont, Pa.

Waterspar—Enamels and Lacquers. Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Watertender—Humidifier Valves. Skuttle Mfg. Co., Detroit, Mich.

WAW—Tools. W. A. Whitney Mfg. Co., Rockford, Ill.

Wearweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.

Weather-Chrome—Time Switches. Automatic Devices Co., Inc., Western Springs, Ill.

Weathercote—Roof Cement, Caulking Compounds, Paints, Waterproofing. Glidden Co., Cleveland, Ohio.

Weather-Flo—Controls. Automatic Devices Co., Inc., Western Springs, Ill.

Weathermaker—Air Conditioning Units. Carrier Corp., Syracuse, N. Y.

Weather-Man—Weather Compensating Thermostats, Automatic Devices Co., Inc., Western Springs, Ill.

Weathertwin—Windows. Chamberlin Co. of America, Detroit, Mich.

Weatherwood—Insulation. United States Gypsum Co., Chicago, Ill.

Webco—Portable Brakes. Webb Machine & Tool Co., Imperial, Pa.

Webster—Air Washers. W. J. Strandwitz & Co., Inc., Camden, N. J.

Wedgebelt—Belts and Pulleys. American Pulley Co., Philadelphia, Pa.

Weir—Furnaces, Heaters, Stokers. Meyer Furnace Co., Peoria, Ill.

Weir-Meyer—Air Conditioning Units, Burners, Furnaces. Meyer Furnace Co., Peoria, Ill.

Weiralead—Sheets. Weirton Steel Co., Weirton, W. Va.

Weircoloy—Copper Bearing Galvanized Sheets. Weirton Steel Co., Weirton, W. Va.

Weirite—Tin Plate. Weirton Steel Co., Weirton, W. Va.

Weirzin—Electrolitic Zinc Coated Sheets. Weirton Steel Co., Weirton, W. Va.

Weisco—Skylight Lifts. H. Weiss & Co., New York, N. Y.

Weld-o-trol—Spot Welders. Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Weldmaster—Brazing Torches. Modern Engineering Co., St. Louis, Mo.

Wellsville Savage—Refractories. Chicago Fire Brick Co., Chicago, Ill.

Wesco—Blower-Filters, Oil Burners, Cabinets & Casings, Furnaces. Northwest Foundry & Furnace Co., Portland, Ore.

Western—Blowers, Furnaces. International Sales Co., San Francisco, Calif.

Western—Water Heaters. W. B. Bastian Mfg. Co., Los Angeles, Calif.

Westernaire—Ventilating Fans. Western Engineering & Mfg. Co., Venice, Calif.

Westmoreland—Furnaces. American-Standard, Pittsburgh, Pa.

Wetoil—Soldering Flux. Farrelloy Co., Inc., Philadelphia, Pa.

Wevelite—Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.

Whip Clamp—Clamping Device. Whipple Sheet Metal Works, Lansing, Mich.

Whippet—Hoists. Ford Chain Block Div. American Chain & Cable Co., Inc., York, Pa.

Whirlcone—Spray Nozzles. Water Cooling Equipment Corp., St. Louis, Mo.

Whirljet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.

Whirlout—Ventilators. Swartwout Co., Cleveland, Ohio.

Whitney-Jensen—Sheet Metal Working Machinery and Tools. Whitney Metal Tool Co., Rockford, Ill.

Wiechert—Furnaces, Heaters. St. Clair Foundry Corp., Centralia, Ill.

Wilson—Arc Welders. Air Reduction Sales Co., New York, N. Y.

Wilson—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.

Wind Electric—Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

Wind-O-Cool—Fans. G. J. Belter Electric Mfg. Co., St. Louis, Mo.

Windial—Anemometers. Friez Instrument Div. Bendix Aviation Corp., Baltimore, Md.

Windmaster—Exhausters, Roof Ventilators. Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.

Wind-O-Vent—Fans. Diehl Manufacturing Company, Somerville, N. J.

Wind-O-Vent—Ventilator Units. Reed Unit-Fans, Inc., New Orleans, La.

Wingfoil—Fans, Ventilators. L. J. Wing Mfg. Co., Linden, N. J.

Winkler—Oil & Gas Burners, Stokers. U. S. Machine Corp., Lebanon, Ind.

Winter-Chaser—Furnaces, Heaters. Campbell Heating Co., Des Moines, Iowa.

Winterglo—Furnaces. American-Standard Corp., Puttsburgh, Pa.

Winter King—Furnaces. McPherson Furnace & Supply Co., Portland, Ore.

Winterway—Furnaces. American-Standard Corp., Pittsburgh, Pa.

Wisconsin—Motors. Electric Motor Corp., Racine, Wis.

Wizard—Furnaces. Agricola Furnace Co., Inc., Gadsden, Ala.

W.O. No. 1—Rust Preventive Chemicals. Turco Products, Inc., Los Angeles, Calif.

Wolfe—Angle Meter, Center Finders, Circle Meter, Divisor, Protractor, Interstate Sales Co., New York, N. Y.

Wolverine—Furnaces. Marshall Furnace Co., Marshall, Mich.

Wondaire—Furnaces. Cox Mfg. Co., Ridgeville, Ind.

Wonderflux—Soldering Flux. Sherman & Co., New York, N. Y.

Woolfelt—Duct Insulation. Norristown Magnesia & Asbestos Co., Norristown, Pa.

Woolmaster—Blowers. Molloy Machine Corp., Chicago, Ill.

Wormfeed—Stokers. Canton Stoker Corp., Canton, Ohio.

WR—Controls. White-Rodgers Electric Co., St. Louis, Mo.

Wyandotte—Furnaces. American-Standard Corp., Pittsburgh, Pa.

Wyco—Flexible Shaft Machines. Wyzenbeek & Staff, Inc., Chicago, Ill.

Wycoflex—Grinder. Wyzenbeek & Staff, Inc., Chicago, Ill.

X

XL—Metal Windows. Herrmann & Grace Co., Brooklyn, N. Y.

X-L-All—Furnaces. Deshler Foundry & Machine Works, Deshler, Ohio.

Xcel-Flux—Soldering Flux. American Products Corp., Chicago, Ill.

Xit—Ventilators. Iona Ventilator Co., Inc., Philadelphia, Pa.

X-Pandoseal—Transparent Waterproofing. X-Pando Corp., Long Island City, N. Y.

XX—Punches. Parker-Kalon Corp., New York, N. Y.

Y

Yager's—Flux. Alex R. Benson Co., Inc., Hudson, N. Y.

Yale—Water Heaters. W. B. Bastian Mfg. Co., Los Angeles, Calif.

Yankee—Damper Clips and Tips. Howes-Woods Company, Cambridge, Mass.

YarWay—Nozzles. Yarnall-Waring Co., Philadelphia, Pa.

Yemco—Buffers, Grinders. York Electric & Machine Co., York, Pa.

Yoloy—Plates. Youngstown Sheet & Tube Co., Youngstown, Ohio.

York-Heat—Oil Burners, Furnaces, Heaters. York-Shipley, Inc., York, Pa.

Yorkaire—Air Conditioning Units. York Corp., York, Pa.

YouBert—Collectors and Blow Pipe Fittings. Young & Bertke Co., Cincinnati, Ohio.

Z

Z Seal—Bearings. Shafer Bearing Co., Downers Grove, Ill.

Zaponite—Sheet Metal Paint. Atlas Powder Co., North Chicago, Ill.

Zeph-Air—Gas Furnace XXth Century Heating & Ventilating Co., Akron, Ohio.

Zephair—Fans. Hunter Fan & Ventilating Co., Inc., Memphis, Tenn.

Zephyr—Furnaces. Premier Furnace Co., Dowagiac, Mich.

Zephyr—Humidifiers. Maid-O'-Mist, Inc., Chicago, Ill.

Zephyr—Portable Electric Drills. Portable Electric Tools, Inc., Chicago, Ill.

Zephyr—Saws. DoAll Company, Minneapolis, Minn.

Zero—Cement and Refractories. Standard Fuel Engineering Co., Detroit, Mich.

Zilloy—Zinc Roofing and Sheets. New Jersey Zinc Co., New York, N. Y.

Zinc-Alloy—Sheets. Inland Steel Co., Chicago, Ill.

Zincgrip—Metal Sheets. Armco Steel Corp., Middletown, Ohio.

Zinodine—Corrosion-preventive and paint bonding chemical. American Chemical Paint Co., Ambler, Pa.

Zip—Portable Spot Welders. Mid-States Welder Mfg. Co., Chicago, Ill.

Zoneair—Furnaces. Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.

Zono—Combustion Chambers. Robinson Insulation Co., Great Falls, Mont.

Zonolite—Insulation. Robinson Insulation Co., Great Falls, Mont

Zonolite Brand—Insulation. Western Metal Products Co., Minneapolis, Minn.

Section of

American Artisan

1953 DIRECTORY OF WARM AIR HEATING, RESIDENTIAL AIR CONDITIONING AND SHEET METAL PRODUCTS

[Part 3—MANUFACTURERS' ADDRESSES]

A

A & A Register Co., 8327 Clinton Rd., Cleveland 9, Ohio.
A and B Mfg. Co., 660 Minnesota St., San Francisco 7, Calif.
A. C. Co., 2093 Torrance Blvd., Torrance, Calif.
A-J Mfg. Co., 2119 Washington St., Kansas City 8, Mo.
A-P Controls Corp., 2450 N. 32nd St., Milwaukee 45, Wis.
Abbott Mfg. Co., 332 E. Main St., Painesville, Ohio.
Acadia Synthetic Products Div., Western Felt Wks., 4115 Ogden Ave., Chicago, Ill.
Accurate Sheet Metal & Mfg. Works, 2336-40 Milwaukee Av., Chicago 47, Ill.
Ace Co., 112 W. Washington St., P. O. Box 1212, Ocala, Fla.
Acer & Whedon, Inc., Commercial St., Medina, N. Y.
Acet-A-Tips Co., 5069 W. Madison St., Chicago 44, Ill.
Ackermann Mfg. Co., Wheeling, W. Va.
Acme Asbestos Covering & Flooring Co., 222 Elizabeth St., Chicago 7, Ill.
Acme Elec. Corp., Cuba, N. Y.
Acme Electric Heating Co., Inc., 1205 Washington St., Boston 18, Mass.
Acme Electric Welder Co., 2618 Fruitland Ave., Los Angeles 58, Calif.
Acme Equipment Co., Inc., 126 S. Clinton St., Chicago 6, Ill.
Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.
Acme Furnace Fitting Co., 844 W. 59th St., Chicago 21, Ill.
Acme Heat & Power Inc., 318 Ten Eyck St., Brooklyn 6, N. Y.
Acme Industries, Inc., Mechanic & Ganson Sts., Jackson, Mich.
Acme Mfg. Co., 7930 State Rd., Philadelphia 36, Pa.
Acme Oil Burner Co., Inc., 210 Third Av. S. W., Cedar Rapids, Iowa.
Acme Steel Co., 2840 Archer Ave., Chicago 8, Ill.
Acme Wire & Iron Works, Canfield & Moran, Detroit 7, Mich.
Acro Welder Mfg. Co., 1825 W. St. Paul Ave., Milwaukee 3, Wis.
Adams Bros. Mfg. Co., Inc., 1500 W. North Av., Pittsburgh 33, Pa.
Adams Co., The, Bridge St., Dubuque, Iowa.
Adams Mfg. Co., 1530 St. Clair Av., Cleveland 3, Ohio.
Adelta Mfg. Co., 21st & Ellsworth Sts., Philadelphia 46, Pa.
Advance Aluminum Castings Corp., 2742 W. 36th Pl., Chicago 32, Ill.
Advance Furnace Co., 2300 E. Douglas, Wichita 7, Kans.
Aeolus Dickinson, 3320, S. Artesian Av., Chicago 8, Ill.
Aerofin Corp., 410 S. Geddes St., Syracuse 1, N. Y.
Aeroil Products Co., Inc., Wesley St., South Hackensack, N. J.
Aeroquip Corp., 300 S. East Ave., Jackson, Mich.
Aerotec Corp., The, Greenwich, Conn.
Aerotrol Engineering Corp., 4135 Brownsville Rd., Pittsburgh 27, Pa.
Aerovent Fan Co., Inc., 710 E. Ash St., Piqua, Ohio.
Aget-Detroit Co., 606 First National Bank Bldg., Ann Arbor, Mich.
Agnew Electric Co., 127 S. Main St., Milford, Mich.
Agricola Furnace Co., Inc., North 12th St., Gadsden, Ala.
Ahlberg Bearing Co., 3012 W. 47th St., Chicago 32, Ill.
Air Comfort Co., 5204 Chakemco St., South Gate, Calif.
Air Conditioning Engineering Co., 44 First St., Cambridge 41, Mass.
Air Conditioning Equipment Co., 301 N. 7th St., Minneapolis 3, Minn.
Air Conditioning Products Co., 2340 W. Lafayette Blvd., Detroit 16, Mich.
Air Controls, Inc., 2310 E. Superior Av., Cleveland 14, Ohio.
Air Control Products, Inc., Coopersville, Mich.
Air Cooling Engineering Co., Box 744, Evanston, Ill.
Air Devices, Inc., 17 E. 42nd St., New York 17, N. Y.
Air-Eau Heat, Inc., 1002 S.E. 53rd Ave., Portland 12, Ore.
Aireflo Furnace Pipe Co., 12800 E. 9 Mile Rd., Van Dyke, Mich.
Air Equipment Co., Inc., 1713 W. Carroll Ave., Chicago 12, Ill.
Airfan Engineering Co., 7401 Anaheim-Telegraph Rd., Los Angeles 22, Calif.
Air Filter Corp., 108 N. Water St., Milwaukee 2, Wis.
Airflame, 648 McAlister Av., Waukegan, Ill.
Airfloor of America, 3840 Delmas Terr., Culver City, Calif.
Airgard Mfg. Co., 362 W. Erie St., Chicago 10, Ill.
Airjet Ventilator Co., 380 Plumosa Dr., Pasadena 10, Calif.
Airmaster Corp., 4317 Ravenswood Av., Chicago 13, Ill.
Air-Maze Corp., 5200 Harvard Av., Cleveland 5, Ohio.
Air Purification Service, Inc., 136 Liberty St., New York, N. Y.
Air Reduction Sales Co., 60 E. 42nd St., New York 17, N. Y.
Air & Refrigeration Corp., 475 Fifth Av., New York 17, N. Y.
Air-Speed Tool Co., 1502 W. Slauson Av., Los Angeles 47, Calif.
Air Stream Filter Corp., 2100 Washington Av., St. Louis 3, Mo.
Airtemp Div., Chrysler Corp., 1600 Webester St., Dayton 1, Ohio.
Airtherm Mfg. Co., 706 S. Spring Ave., St. Louis 10, Mo.
Airwasher Corp., Eaton Rapids, Mich.
Ajax Building Bracket Co., 1551 Rydal-Mount Rd., Cleveland Heights 18, Ohio.
Ajax Furnace Fitting Co., Div., Cincinnati Sheet Metal & Roofing Co., 216 E. Front St., Cincinnati 2, Ohio.
Ajax Thermostatic Controls Co., County Line Rd., Gates Mills, Ohio.
Akeley-Steel Co., 225 Galena Blvd., Aurora, Ill.
Alabama Metal Lath Co., P. O. Box 992, Birmingham, Ala.
Aladdin Heating Corp., 2272 San Pablo Av., Oakland 12, Calif.
Albertson & Co., Inc., Sioux City 3, Iowa.
Alco Valve Co., 865 Kingsland Av., St. Louis 5, Mo.
Alden Mfg. Co., W. Walnut St., Painesville, Ohio.
Aldrich Co., Wyoming, Ill.
Alfol Div., Reflectal Corp., 155 E. 44th St., New York 17, N. Y.
All Metal Screw Products Co., Inc., 33 Green St., New York, N. Y.
All-State Welding Alloys Co., Inc., 249-55 Ferris Ave., White Plains, N. Y.
Allan Engineering Co., Box 1211, Dallas 1, Texas.
Allegheny Ludlum Steel Corp., 2020 Oliver Bldg., Pittsburgh 22, Pa.
Allen, H. D., 3201 Casitas Ave., Los Angeles 39, Calif.
Allen-Bradley Co., 1335 S. First St., Milwaukee 4, Wis.
Allen Co., Inc., L. B., 6719 Bryn Mawr Ave., Chicago 31, Ill.
Allen Mfg. Co., Inc., Nashville 1, Tenn.
Allen Stoker Co., 235 S. Penn St., Allentown, Pa.
Allen Ventilator Div., Production Planning Co., 704 Woodward, Rochester, Mich.
All-Gas Equipment Co., 3235 N. 31st St., Milwaukee 10, Wis.
Allied Heating & Air Conditioning Co., 14807 Condon Av., Lawndale, Calif.
Allis-Chalmers Mfg. Co., P. O. Box 512, Milwaukee 1, Wis.
Allis Co., Louis, 427 Stewart St., Milwaukee 7, Wis.
Allmetal Weatherstrip Co., 2241 N. Knox Av., Chicago 39, Ill.
Alpha Metals, Inc., 56 Water St., Jersey City, N. J.
Alpha Tool & Supply Co., P.O. Box 119, Westwood, N. J.
Alphil Spot Welding Co., 1058 Pacific St., Brooklyn 1, N. Y.
Alton Mfg. Co., 1112 Ross Av., Dallas 2, Texas.
Alton Mineral Wool Insulation Co., 2317 Whittemore Pl., St. Louis 4, Mo.
Aluminum Co. of America, 801 Gulf Bldg., Pittsburgh 19, Pa.
Aluminum Goods Mfg. Co., Manitowoc, Wis.
Amerform Corp., Real Estate Trust Building, Philadelphia 7, Pa.
American Agile Corp., P. O. Box 168, Bedford, Ohio
American Air Filter Co., Inc., 355 Central Av., Louisville 8, Ky.

American Blower Corp., Detroit 32, Mich.
American Brass Co., 414 Meadow St., Waterbury 20, Conn.
American Cabinet Hardware Corp., Rockford, Ill.
American Chemical Paint Co., Brookside Av., Ambler, Pa.
American Coal Burner Co., 18 E. Erie St., Chicago 11, Ill.
American Coils, Inc., 360 Thomas St., Newark 5, N. J.
American Control Co., Box 629, Compton, Calif.
American Coolair Corp., 3604 Mayflower St., P. O. Box 2300, Jacksonville 3, Fla.
American Cooling Tower Co., 2710 McGee St., Kansas City, Mo.
American District Telegraph Co., 155 Sixth Ave., New York, N. Y.
American Electric Heater Co., 6110 Cass Av., Detroit, Mich.
American Engineering Co., 2446 Aramingo Av., Philadelphia 25, Pa.
American Flange & Mfg. Co., Inc., 30 Rockefeller Plaza, New York 20, N. Y.
American Fluresit Co., 4011 Red Bank Rd., Cincinnati 27, Ohio.
American Foundry & Furnace Co., Washington at McClun St., Bloomington, Ill.
American Furnace Co., 1300 Hampton Av., St. Louis 10, Mo.
American Gas Burner, Inc., 418 S. Pennsylvania St., Indianapolis 4, Ind.
American Gas Machine Co., 505 Front St., Albert Lea, Minn.
American Hair & Felt Co., 222 N. Bank Dr., Chicago 54, Ill.
American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
American Ideal-Aire Corp., P. O. Box 470, Mineola, N. Y.
American Instrument Co., Inc., 8010 Georgia Av., Silver Spring, Md.
American Insulator Corp., New Freedom, Pa.
American-Larson Ventilating Co., 1004 Keystone Bldg., Pittsburgh 22, Pa.
American Machine Products Co., 401 S. Third Av., Marshalltown, Iowa.
American-Marietta Co., 101 E. Ontario St., Chicago 11, Ill.
American Metal Hose Branch, American Brass Co., 698 S. Main St., Waterbury 20, Conn.
American Metal Products, 2911 Compton Ave., Los Angeles 11, Calif.
American Mohawk Co., Inc., 580 Hudson St., New York 14, N. Y.
American MonoRail Co., 13133 Athens Ave., Cleveland 7, Ohio.
American Nickeloid Co., 1505 Second St., Peru, Ill.
American Pneumatic Tool Co., 681 Fifth Ave., New York 22, N. Y.
American Products Corp., 422 S. Dearborn St., Chicago 5, Ill.
American Pulley Co., 4200 Wissahickon Av., Philadelphia 29, Pa.
American Radiator & Standard Sanitary Corp., P. O. Box 1226, Pittsburgh 30, Pa.
American Screw Co., Willimantic, Conn.
American Silver Co., Inc., 36-07 Prince St., Flushing, N. Y.
American Solder & Flux Co., 2152 East Norris St., Philadelphia 25, Pa.
American Solvent Recovery Corp., Pur Air Div., 8th & Cassady Aves., Columbus 3, Ohio
American Steel Band Co., P. O. Box 565, Pittsburgh 30, Pa.
American Steel & Wire Co., Sub. U. S. Steel Corp., Rockefeller Bldg., Cleveland, Ohio.
American Ventilating Hose Co., 100 Park Av., New York 17, N. Y.
American Warming & Ventilating Co., 1017 Summit St., Toledo 4, Ohio.
Aminco Refrig. Products Co., 14544 Third Ave., Detroit 3, Mich.
Ammerman Co., C. L., 104 N. 2nd St., Minneapolis 1, Minn.
Ampion Corp., 4-88 Forty-Seventh Av., Long Island City 1, N. Y.
Anchor Div. Stratton & Terstegge Co., P. O. Box 311, New Albany, Ind.
Andale Co., 1740 Cherry St., Philadelphia 3, Pa.
Andrews Heater Co., 1750 W. Jefferson Blvd., Los Angeles 18, Calif.
Andrews Heating Co., 117-199 Main St., S. E., Minneapolis 14, Minn.
Andrews-Schroeder Heating Co., Inc., 120 W. Chevy Chase, Glendale 4, Calif.
Anemostat Corp. of America, 10 E. 39th St., New York 16, N. Y.
Angier Corp., Framingham, Mass.
Ansul Chemical Co., Refrigeration Div., Marinette, Wis.
Anti-Friction Bearings Co., 2020 S. Figueroa St., Los Angeles 7, Calif.
Apollo Metal Works, 66th Pl. & S. Oak Park Av., Clearing Sta., Chicago 38, Ill.
Appleton Supply Co., Inc., P. O. Box 319, Appleton, Wis.
Applied Mechanics Co., 167 Oliver St., Boston 10, Mass.
Aqua-Air Corp., 1040 Hempstead Tpke., Elmont, L. I., N. Y.
Aqua-Mist Co., 426 Jefferson St., Topeka, Kans.
Arabol Mfg. Co., 110 E. 42nd St., New York 17, N. Y.
Arcos Corp., 1500 S. 50th St., Philadelphia 43, Pa.
Arcweld Mfg. Co., Inc., 3469 Third Av., W., Seattle 99, Wash.
Arex Co., 4317 Ravenswood Av., Chicago 13, Ill.
Arizona Maintenance Co., 1920 Miracle Mile, Tucson, Ariz.
Arlington Electric Co., 5530 Easton Av., St. Louis 12, Mo.
Armco Steel Corp., 703 Curtis St., Middletown, Ohio.
Armstrong Co., 241 S. Post St., Detroit 17, Mich.
Armstrong Cork Co., Lancaster, Pa.
Armstrong Furnace Co., 851 W. Third Ave., Columbus 8, Ohio; 1701 E. Euclid Av., Des Moines 4, Iowa.
Armstrong Products Corp., Box 940, Huntington 12, W. Va.
Armstrong Co., Richard M., Westchester, Pa.
Arrow-Hart & Hegeman Electric Co., 103 Hawthorne St., Hartford 6, Conn.
Art Valve Co., 4662 N. Lincoln Ave., Chicago 25, Ill.
Aston Products, Inc., 22804 Dequindre St., Hazel Park, Mich.
Associates Engineering Co., 110 Elmwood Ave., Buffalo 1, N. Y.
Atcheson Glass Co., T. J., 920 Main St., Buffalo 2, N. Y.
Atchison Specialty Mfg. Co., 1620 Pacific Av., Atchison, Kans.
Atkins Saw Div., Borg-Warner Corp., 402 S. Illinois St., Indianapolis 9, Ind.
Atkomatic Valve Co., 545 W. Abbott St., Indianapolis, Ind.
Atlas Mfg. Co., Eustis and Robbins, St. Paul 4, Minn.
Atlas Powder Co., North Chicago, Ill.
Atlas Valve Co., 282 South St., Newark 5, N. J.
Atlas Welding Accessories Co., 707 Lewiston St., Ferndale 20, Mich.
Auburn Burner Co., Lock Box 269, Auburn, Ind.
Auburn Foundry, Inc., Stoker Div., Lock Box 471, Auburn, Ind.
Auer Register Co., 6600 Clement Ave., Cleveland 5, Ohio.
Au-Temp-Co Corp., 520 Broadway, New York 12, N. Y.
Auto-Flo Corp., 13526 Fenkell, Detroit 27, Mich.
Autoforce Ventilating System, 244 Washington St., Boston 8, Mass.
Autogas Co., 2153 Fullerton Ave., Chicago 47, Ill.
Auto-Heat, Newfield St., Middletown, Conn.
Automatic Burner Corp., 1823 Carroll Av., Chicago 12, Ill.
Automatic Control Co., 1005 University Ave., St. Paul 4, Minn.
Automatic Controls Corp., Ann Arbor, Mich.
Automatic Devices Co., Inc., Weather Controls Div., 714 Hillgrove Av., Western Springs, Ill.
Automatic Electric Mfg. Co., 10 State St., Mankato, Minn.
Automatic Firing Corp., 4417 Oleatha Ave., St. Louis 16, Mo.
Automatic Gas Equipment Co., 301 Brushton Av., Pittsburgh 21, Pa.
Automatic Humidifier Co., 19th & Main Sts., Cedar Falls, Iowa.
Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
Automatic Temperature Control Co., Inc., 5212 Pulaski Av., Philadelphia 44, Pa.
Autorad, Inc., 3535 Fillmore St., Chicago 24, Ill.

B

B & C Metal Stamping Co., 590-592 Means St., N.W., Atlanta 3, Ga.
B. G. B. Mfg. Co., 5021 Wyoming, Dearborn, Mich.
B/W Controller Corp., 2200 E. Maple Av., Birmingham, Mich.
Babbin, Inc., 258 Canal St., New York 13, N. Y.
Babbitt Chemical Specialties Co., 36 Prospect St., New Bedford, Mass.
Babcock & Wilcox Co., Refractories Div., 161 E. 42nd St., New York 17, N. Y.
Bacharach Industrial Instrument Co., 7000 Bennett St., Pittsburgh 8, Pa.
Bache & Co., Semon, Greenwich & Morton Sts., New York 14, N.Y.
Baer Bros., 438 W. 37th St., New York 18, N. Y.
Bahnson Co., 1001 S. Marshall St., Winston-Salem, N. Car.
Bailey Co., Chas. M., 667 Folsom St., San Francisco 7, Calif.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Baker Bros. Inc., Post & Harleau Sts., Toledo 10, Ohio.
Baker Furnace & Cleaner Mfg. Co., 2810 Midwood Av., Toledo 6, Ohio.
Baker Refrigeration Corp., South Windham, Maine.
Baldor Electric Co., 4358 Duncan Av., St. Louis 10, Mo.
Baldwin-Hill Co., 597 Breunig Ave., Trenton 2, N. J.
Balloffet Dies & Nozzle Co., Inc., 6825 Adams St., Guttenberg, N. J.
Balmar Corp., Woodberry, Baltimore 11, Md.
Baltimore Aircoil Co., Inc., 2615-2635 Mathews St., Baltimore 18, Md.
Baltimore Porcelain Steel Corp., P. O. Box 928 AA, Baltimore 3, Md.
Banner Burner Co., Indianola Ave., Youngstown 7, Ohio.
Banner Products Co., 6804 N. 43rd St., Milwaukee 9, Wis.
Banner Repair Parts Co., 103 E. Indianola Av., Youngstown 7, Ohio.

Barber-Colman Co., 1226 Rock St., Rockford, Ill.
Barber Gas Burner Co., 3704 Superior Av., Cleveland 14, Ohio.
Bar-Brook Mfg. Co., Inc., 6135 Linwood Av., Shreveport, La.
Barcafer Mfg. Co., Salina, Kans.
Barclay Co., Robert, 1234 W. Fulton St., Chicago, Ill.
Bard Mfg. Co., Evansport Road, Bryan, Ohio.
Barkow Mfg. Co., Inc., Aug. G., 2230 S. 43rd St., Milwaukee 15, Wis.
Barksdale Valves, 1566 E. Slauson Ave., Los Angeles 11, Calif.
Barnard Co., Geo. A., 74 Prescott St., Worcester, Mass.
Barnes Metal Products Co., 4425 W. 16th St., Chicago 23, Ill.
Barnes Co., Inc., W. O., 1297 Terminal Av., Detroit 14, Mich.
Barnhardt Mfg. Co., P. O. Box 2176, Charlotte 1, N. C.
Barreled Sunlight Paint Co., 35 Dudley St., Providence 1, R. I.
Barrett Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.
Barth Mfg. Co., Milldale, Conn.
Bartlett Mfg. Co., 3003 E. Grand Blvd., Detroit 2, Mich.
Barton Co., 719 Hennepin, Minneapolis 2, Minn.
Barwick Mfg. Corp., 317 E. 18th, Wichita 5, Kans.
Bastian-Blessing Co., 4201 W. Petersen Av., Chicago 30, Ill.
Bastian Mfg. Co., W. B., 2117 Violet St., Los Angeles 21, Calif.
Bastian-Morley Co., Inc., 208 Truesdale Ave., La Porte, Ind.
Bath Co., Cyril, E. 70th & Machinery Av., Cleveland 3, Ohio.
Bauer & Black Div., The Kendall Co., 2500 S. Dearborn St., Chicago 16, Ill.
Baum Heating Co., Inc., J. H., 6400 Southern Blvd., Youngstown, Ohio
Bayley Blower Co., 1817 S. 66th St., Milwaukee 14, Wis.
Bayonne Steel Products Co., Clinton & Jeliff Aves., Newark 8, N. J.
Beacon-Morris Corp., 60 Brainerd Rd., Allston, Boston 34, Mass.
Bead Chain Mfg. Co., 105 Mountain Grove St., Bridgeport 5, Conn.
Beall Pipe & Tank Corp., 1945 N. Columbia Dr., Portland 3, Ore.
Bearlee Products Co., 1255 S. Monroe Ave., Green Bay, Wis.
Bear Mfg. Co., Industrial Div., 2030 Fifth Av., Rock Island, Ill.
Beatty Machine & Mfg. Co., 932 150th St., Hammond, Ind.
Beck Engineering Combustion Kompany, 2100 Cole St., St. Louis 6, Mo.
Beck Mfg. Co., 315-317 W. Main St., New Albany, Ind.
Beckett & Co., Thomas, 2521 Willowbrook Rd., P. O. 7354, Dallas 9, Texas.
Beckett Corp., R. W., W. River St., Elyria, Ohio.
Beckley Perforating Co., 305 North Av., Garwood, N. J.
Belden Machine Co., 1108 Whalley Av., New Haven 15, Conn.
Bellows Co., 222 W. Market St., Akron 9, Ohio
Belmetals Mfg. Co., 1300 Old County Rd., Belmont, Calif.
Belmont Smelting & Refining Works, Inc., 330 Belmont Av., Brooklyn 7, N. Y.
Belter Electric Mfg. Co., G. J., 3830 Olive St., St. Louis 8, Mo.
Benchmaster Mfg. Co., 1835 W. Rosecrans, Gardena, Calif.
Benjamin Air Rifle Co., 1527 S. 8th St., St. Louis 4, Mo.
Benjamin Electric Mfg. Co., Des Plaines, Ill.
Benner-Nawman, Inc., 3421 Hollis, Oakland, Calif.
Benson Co., Inc., Alex R. 1040 S. Bay Rd., Hudson, N. Y.
Berger Bros. Co., 229-237 Arch St., Philadelphia 6, Pa.
Berger Furnace Mfg. Co., 5920 Center Av., Pittsburgh 6, Pa.
Berger Mfg. Div. of Republic Steel Corp., 1038 Bleden Ave., N. E., Canton 5, Ohio.
Bergstrom Mfg. Corp., Neenah, Wis.
Berkroy Products, Inc., 2516 N. Ontario St., Burbank, Calif.
Bern's Mfg. Co., 2278 Elston Av., Chicago 14, Ill.
Bernz Co., Otto, 280 Lyell Ave., Rochester 6, N. Y.
Berridge Shear Co., Jefferson & St. Joseph Sts., Sturgis, Mich
Bertram Co., Harvey P., 1008 W. 9th St., Cincinnati, Ohio.
Bertsch & Co., Church St., Cambridge City, Ind.
Besco Mfg. Co., P. O. Box 1163, Cincinnati 1, Ohio.
Besser Metal Products Corp., 754 Clement Ave., Charlotte, N. C.
Best Register Co., 2005 W. Oklahoma Av., Milwaukee 15, Wis.
Bethlehem Foundry & Machine Co., 225 W. Second St., Bethlehem, Pa.
Bethlehem Steel Co., 701 E. Third St., Bethlehem, Pa.
Bett-Marr Mfg. Co., Hopkins, Minn.
Bettinger Corp., Waltham, Mass.
Betz Corp., 445 State St., Hammond, Ind.
Beverly Shear Mfg. Co., The, 3020 W. 111th St., Chicago 43, Ill.
Beyer Oil Burner Co., Rosamond, Calif.
Bica Co., Girard, Ohio
Bieler & Sons, Inc., L., 35-42 41st St., Long Island City, N. Y.
Biersach & Niedermeyer Co., 1937 N. Hubbard St., Milwaukee 12, Wis
Big Joe Mfg. Co., 184 N. Franklin St., Chicago 6, Ill.
Biggs Boiler Wks. Co., E., 1007 Bank St., E. Akron 5, Ohio
Billmyre Blower Div., Lamson Corp., Syracuse, N. Y.
Binks Mfg. Co., 3114 Carroll Av., Chicago 12, Ill.
Bird Archer Co., 4337 N. America St., Philadelphia, Pa.
Bird & Son, Inc., East Walpole, Mass.
Birdsell Mfg. Co., 871 San Antonio Rd., Palo Alto, Calif.
Birks Mfg. Co., 809 Hanover St., Meriden, Conn.
Bishop & Babcock Mfg. Co., 4901 Hamilton Av., Cleveland 14, Ohio.
Bishop Co., R. H., 103 N. Second St., Champaign, Ill.
Black & Decker Mfg. Co., 682 Pennsylvania Ave., Towson 4, Md.
Black Diamond Stoker Co., E. 4th & Plymouth, Sioux City, Iowa.
Black Mfg. Co., 201 Second St., Harrison, N. J.
Black, Sivalls & Bryson, Inc., 7300 E. 12th St., Kansas City 3, Mo.
Bliss Co., E. W., 1375 Raff Rd., S.W., Canton, Ohio.
Blower Application Co., 3165 N. 30th St., Milwaukee 16, Wis.
Blue Ridge Talc Co., Inc., Henry, Va.
Bock Corp., 110 S. Dickinson St., Madison 3, Wis.
Bodine Electric Co., 2254 W. Ohio St., Chicago 12, Ill.
Bogue Electric Co., 52 Iowa St., Paterson 3, N. J.
Bohn Aluminum & Brass, Michigan Ave. & Shelby St., Detroit, Mich.
Bomas Mfg. Co., 209 State St., Binghamton, N. Y.
Borm Mfg. Co., 23 N. Union St., Elgin, Ill.
Bossert Co., Div., The Timken-Detroit Axle Co., 1002 Oswego St., Utica 1, N. Y.
Boston Machine Works Co., 7 Willow St., Lynn, Mass.
Botfield Refractories Co., Swanson & Clymer Sts., Philadelphia 47, Pa.
Bovee Furnace Works, 180 W. Eighth St., Waterloo, Iowa.
Bowlby Air Devices Co., 300 W. Indianapolis, Wichita, Kans.
Bowser, Inc., Incineration Div., Cairo, Ill.
Boyle-Midway, Inc., Correctair Div., 22 E. 40th St., New York, N. Y.
Braden Mfg. Co., Inc., 431 N. 14th St., Terre Haute, Ind.
Brandes Co., 2046 Winnebago St., Madison 4, Wis.
Brasco Mfg. Co., 152nd & Commercial Av., Harvey, Ill.
Brauer Supply Co., A. G., 2100 Washington Ave., St. Louis 3, Mo.
Breese Burners, Inc., P. O. Box 1458, Sante Fe, N. Mex.
Breeze Corps., Inc., 43 S. 6th St., Newark 7, N. J.
Breidert, G. C., Co., 3129 San Fernando Rd., Los Angeles 65, Calif.
Bremil Mfg. Co., Box 1030, Erie, Pa.
Brenner & Co., Inc., Jacob 45 Third St., Fond du Lac, Wis.
Breuer Electric Mfg. Co., 5100 N. Ravenswood Ave., Chicago 40, Ill.
Bridgeport Brass Co., 30 Grand St., Bridgeport 2, Conn.
Bridgeport Chain & Mfg. Co., 964 Crescent Ave., Bridgeport 1, Conn.
Bristol Co., P.O. Box 1790, Waterbury 20, Conn.
Bristol Metal Working Equipment, 534 Front St., Hartford, Conn.
Broan Mfg. Co., Inc., 1669 N. Water St., Milwaukee 2, Wis.
Brooks Co., Inc., B. D., 361 Atlantic Ave., Boston 10, Mass.
Bros Boiler & Mfg. Co., Wm., 1057 Tenth Ave., S. E., Minneapolis 14, Minn.
Brown-Brockmeyer Co., Inc., 1098 Smithville Rd., Dayton 1, Ohio.
Brown Co., 150 Causeway St., Boston, Mass.
Brown Fintube Co., The, Elyria, Ohio
Brown-Hart Engineering Corp., 1200 E. Nine Mile Rd., Hazel Park, Mich.
Brown Products Co., 97-12 Metropolitan Ave., Forest Hills, N. Y.
Brown Steel Tank Co., 2901 S. E. Fourth St., Minneapolis 14, Minn.
Browning Mfg. Co., Inc., Central Ave., Main & Chester Sts., Maysville, Ky.
Brumme Mfg. Co., 1240 E. Empire St., R. R. 1, Bloomington, Ill.
Brundage Co., 500 N. Park St., Kalamazoo 11, Mich.
Brunner Mfg. Co., 1821 Broad St., Utica 1, N. Y.
Brushes & Brooms Co., 75 Warren St., New York, N. Y.
Bryan Steam Corp., P. O. Box 337, Peru, Ind.
Bryant Corp., C. L., 2720 E. 79th, Cleveland 4, Ohio
Bryant Heater Div., Affiliated Gas Equipment, Inc., 17825 St. Clair Ave., Cleveland 10, Ohio.
Buchanan Electric Products Corp., 226 Route 29, Hillside, N. J.
Buckeye Furnace Pipe Co., Columbus 8, Ohio.
Buckeye Water Heater Co., 6901 Quincy Ave., Cleveland 4, Ohio.
Budco Inc., 13415 Gratiot Av., Detroit 5, Mich.
Buensod-Stacey, Inc., 60 E. 42nd St., New York 17, N. Y.
Buffalo Forge Co., 497 Broadway, Buffalo, N. Y.
Bundy Tubing Co., 8109 E. Jefferson Ave., Detroit 14, Mich.
Burcott Mills, 618 W. Fulton St., Chicago, Ill.
Burden Co., Alan E., 3352 Motor Ave., Los Angeles 34, Calif.
Burdett Mfg. Co., 3433 W. Madison St., Chicago, Ill.
Burgess-Norton Mfg. Co., 773 Peyton St., Geneva, Ill.

Burke Engineering Co., 1204 W. Washington Blvd., Los Angeles 7, Calif.
Burnley Battery & Mfg. Co., 103 Clay St., North East, Pa.
Burnrite Valve Mfg. Corp., 175 W. 1st St., Mt. Vernon, N. Y.
Burns Machinery Co., F. W., 1730 W. North Av., Milwaukee 5, Wis.
Burt Mfg. Co., 38 E. South St., Akron 11, Ohio.
Bush Mfg. Co., 179 South St., West Hartford 10, Conn.
Byers Co., A. M., Clark Bldg., Pittsburgh 22, Pa.

C

C. & H. Air Conditioning Fan Co., Inc., 1603 DeKalb Ave., N. E., Atlanta 6, Ga.
Cabot, Inc., Samuel, 141 Milk St., Boston 9, Mass.
Cady Co., Sub. General Fittings Co., 123 Georgia Av., Providence 5, R. I.
Calbar Paint & Varnish Co., 2612 N. Martha St., Philadelphia 25, Pa.
Calcinator Div., Valley Welding & Boiler Co., Bay City, Mich.
Calculator Specialties Co., 122 S. Michigan Ave., Chicago 3, Ill.
Callahan Can Machine Co., Inc., 80 Richards St., Brooklyn, N. Y.
Caloroil Burner Corp., 850 Windsor St., Hartford 5, Conn.
Cambridge Corp., 350 S. Geddes St., Syracuse, N. Y.
Camloc Fastener Corp., 22 Spring Valley Rd., Paramus, N. J.
Campbell Co., E. K., 1809 Manchester Ave., Kansas City 26, Mo.
Campbell Heating Co., 3121 Dean Av., Des Moines 17, Iowa.
Campbell Machine Div., American Chain & Cable Co., Inc., 929 Connecticut Ave., Bridgeport 2, Conn.
Campbell Stainless Products Co., Washington, Pa.
Cam-StaT Inc., Div. Paul Henry Co., 11833 W. Olympic Blvd., Los Angeles 64, Calif.
Cannelton Sewer Pipe Co., Radiantile Div., Fourth & Washington Sts., Cannelton, Ind.
Canton Stoker Corp., 507 Andrews Pl., S. W., Canton 1, Ohio.
Carajon Chemical Co., Inc., 428 W. Main St., Fremont, Mich.
Carbide & Carbon Chemicals Co., Div. Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Carboline Co., 7603 Forsyth Blvd., St. Louis 5, Mo.
Carey Mfg. Co., Philip, Cincinnati 15, Ohio.
Cargocaire Engineering Corp., 15 Park Row, New York 38, N. Y.
Carlin Co., U. S. Oil Burner Div., River Rd., Wetherfield 9, Conn.
Carlon Products, 10225 Meech, Cleveland, Ohio
Carnes Co., W. R., S. Main St., Verona, Wis.
Carolina Aniline & Extract Co., Inc., P. O. 2386, Charlotte, N. C.
Carolina Blower Co., Inc., 430 Morehead Ave., Greensboro, N. C.
Carpenter Heating & Stoker Co., 2135 St. Clair Ave., Cleveland 14, Ohio.
Carrier Corp., 302 S. Geddes St., Syracuse 1, N. Y.
Carter Paint Co., 310 N. Main St., Liberty, Ind.
Cartier & Sons Co., M. N., 275 Canal St., Providence 3, R. I.
Carvell Heat Equipment Co., 1217 Temple St., Los Angeles 26, Calif.
Cary Mfg. Co., Waupaca, Wis.
Cash Co., A. W., P. O. Box 551, Decatur, Ill.
Catskill Metal Works, Inc., Catskill, N. Y.
Cee-Kleer Products Co., 947 W. 6th St., Cincinnati 3, Ohio
Celco Corp., 110 E. 42nd St., New York 17, N. Y.
Celotex Corp., 120 S. LaSalle St., Chicago 3, Ill.
Central Furnace & Stove Repair Co., 3937 Olive St., St. Louis 8, Mo.
Central Rubber & Steel Corp., Findlay, Ohio.
Central States Mfg. Co., Inc., 1200 S. Summit, Arkansas City, Kans.
Central Transformer Corp., Pine Bluff, Ark.
Centri-Spray Co., 14290 Meyers Rd., Detroit 27, Mich.
Century Electric Co., 1806 Pine St., St. Louis 3, Mo.
Century Engineering Corp., 401 Third St., S. E., Cedar Rapids, Iowa.
Century Fan & Ventilator Co., 43 Cedar St., Stamford, Conn.
Ceramic Products Mfg. Co., 139 E. Garfield Av., Milwaukee 12, Wis.
Certain-teed Products Corp., 120 E. Lancaster Ave., Ardmore, Pa.
Certified Furnace Co., Div. Stainless & Steel Products Co., 1000 Berry Av., St. Paul 4, Minn.
Chain Belt Co., 4618 W. Greenfield Ave., Milwaukee 14, Wis.
Chalmers Oil Burner Co., 312 Lumber Exchange Bldg., Minneapolis 1, Minn.
Chamberlin Co. of America, 1254 Labrosse, Detroit 32, Mich.
Champion Blower & Forge Co., Harrisburg Av., & Charlotte St., Lancaster, Pa.
Champion Bronze Powder & Paint Co., 2522 W. Van Buren St., Chicago, Ill.
Champion Furnace Pipe Co., 211-215 Eaton St., Peoria 3, Ill.
Champion Implement Corp., 45 W. 45th St., New York, N. Y.
Champion Products Co., 1197 Terrace St., Muskegon, Mich.
Chandler Co., 804 1st Av., N. W., Cedar Rapids, Iowa.
Char-Gale Mfg. Co., 4325 Hiawatha Av., Minneapolis 6, Minn.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
Chattanooga Implement & Mfg. Co., First and Delmar Sts., Chattanooga 6, Tenn.
Cheesman-Elliot Co., Inc., 639 Kent Av., Brooklyn 11, N. Y.
Chelsea Fan & Blower Co., Inc., 639 South Ave., Plainfield, N. J.
Chemalloy Associates, Gillespie Airport, Santee, Calif.
Cheney Flashing Co., 623 Prospect St., Trenton 5, N. J.
Chevrolet Motor Div., General Motors Corp., Detroit 2, Mich.
Chicago Automatic Stoker Co., Inc., 14 N. Clinton St., Chicago 6, Ill.
Chicago Belting Co., 113 N. Green St., Chicago 7, Ill.
Chicago Blower Corp., 9867 Pacific Ave., Franklin Park, Ill.
Chicago Die Casting Co., 2510-14 W. Monroe St., Chicago 12, Ill.
Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22, Ill.
Chicago Fan & Finn Coil Co., 1121 S. California Ave., Chicago 12, Ill.
Chicago Fire Brick Co., 1467 N. Elston Av., Chicago 22, Ill.
Chicago Furnace Supply Co., 1278 Clybourn Av., Chicago 10, Ill.
Chicago Heights Furnace Supply Co., 102 E. 22nd St., Chicago Heights, Ill.
Chicago Metal Mfg. Co., 3724 S. Rockwell St., Chicago 32, Ill.
Chicago Perforating Co., 2445 W. 24th Pl., Chicago 8, Ill.
Chicago Pneumatic Tool Co., 6 E. 44th St., New York 17, N. Y.
Chicago Rawhide Mfg. Co., 1312 Elston Av., Chicago 22, Ill.
Chicago Rivet & Machine Co., 9600 W. Jackson Blvd., Bellwood, Ill.
Chicago Smelting & Refining Corp., 3701 S. Kedzie Ave., Chicago 32, Ill.
Chicago Steel Furnace Co., 9326 S. Anthony Ave., Chicago 17, Ill.
Chicago Tramrail Co., 4000 W. Washington Blvd., Chicago 24, Ill.
Chimney-Furnace Corp., 400 Stonestreet Ave., Rockville, Md.
Chimney Sales Corp., Box 146, National Bank Bldg., Fredricksburg, Va.
Chisholm-Moore Hoist Corp., Div. Columbus McKinnon Chain Corp., Fremont Av., Tonawanda, N. Y.
Cincinnati Elbow Co., 2021 Eastern Ave., Cincinnati, Ohio.
Cincinnati Shaper Co., Hopple, Garrard & Elam, Cincinnati 25, Ohio.
Cincinnati Stamping & Furnace Co., 28 W. McMicken Ave., Cincinnati 10, Ohio.
Circulators & Devices Mfg. Corp., 128-168 32nd St., Brooklyn 32, N. Y.
Cirklair Products Div., Folsom Co., Inc., 3104 Oak Lane, Dallas 10, Texas.
Clarage Fan Co., North & Porter Sts., Kalamazoo 16, Mich.
Clark Bros. Bolt Co., Milldale, Conn.
Clark Controller Co., 1146 E. 152 St., Cleveland 10, Ohio.
Clark-Hopkins Equipment Corp., 1124 Spring Garden St., Philadelphia 23, Pa.
Clark Jr., Electric Co., James, 600 E. Bergman St., Louisville 3, Ky.
Clark Co., Robert H., 9330 Santa Monica Blvd., Beverly Hills, Calif.
Clark Stek-O Corp., 1631 Dewey Av., Rochester 15, N. Y.
Clay Equipment Corp., Cedar Falls, Iowa.
Clayton & Lambert Mfg. Co., Louisville Div., 1707 Dixie Hwy., Louisville 10, Ky., and Middletown, Ohio.
Clearing Machine Corp., 6499 W. 65th St., Chicago 38, Ill.
Clemson Bros., Inc., Middletown, N. Y.
Cleveland Heater Co., 2310 Superior Av., N. E., Cleveland 14, Ohio.
Cleveland Humidifier Co., 7802 Wade Park Av., Cleveland 3, Ohio.
Cleveland Punch & Shear Works Co., E. 40th & St. Clair Av., Cleveland 14, Ohio.
Cleveland Crane & Engineering Co., 5866 E. 283rd St., Wickliffe, Ohio.
Climatemaker Heat Loss Calculator Co., Box 378, Bloomington, Ill.
Climax Machinery Co., 301 S. LaSalle St., Indianapolis 6, Ind.
Clinton Metallic Paint Co., Clinton, N. Y.
Coal-O-Matic Co., Trucksville (Luzerne County), Pa.
Coast Insulating Products, 2316 San Fernando Rd., Los Angeles 65, Calif.
Coated Coil Corp., 539 W. 30th St., New York 1, N. Y.
Cole Hot Blast Mfg. Co., 3817 S. Racine Av., Chicago 9, Ill.

Coleman Co., Inc., St. Francis & Second St., Wichita 1, Kans.
Cole-Sewell Engineering Co., 2288 University Av., St. Paul 4, Minn.
Columbia Burner Co., 729 Ewing St., Toledo 7, Ohio.
Columbia Specialty Co., Inc., 503 Bradley Blvd., Chevy Chase 15, Md.
Columbia Steel Co., Sub. United States Steel Corp., Russ Bldg., 235 Montgomery St., San Francisco 6, Calif.
Columbus Heating & Ventilating Co., 182 N. Yale Av., Columbus 16, Ohio.
Combustion Control Corp., 77 Broadway, Cambridge 42, Mass.
Combustion Equipment Co., 405 Cleaveland Bldg., Rock Island, Ill.
Comfort Products Corp., 2220 S. Lamesa St., Dallas 2, Texas.
Commercialaire, Inc., 300 Pacific St., Brooklyn 2, N. Y.
Commercial Filters Corp., 2 Main St., Melrose 76, Mass.
Commercial Plastics Co., 2226 Wabansia Ave., Chicago 47, Ill.
Commercial Shearing & Stamping Co., P. O. Box 719, Youngstown 1, Ohio.
Commonwealth Brass Corp., 5781-5835 Commonwealth Av., Detroit 8, Mich.
Commonwealth Co., 2127 W. Commonwealth Av., Alhambra, Calif.
Compton Shear Co., W. H., 314 Camden St., Newark 3, N. J.
Conco Engineering Works, Heating Division, Mendota, Ill.
Condensation Engineering Corp., 3511 W. Potomac Ave., Chicago 51, Ill.
Condenser Service & Engineering Co., Inc., 95 River St., Hoboken, N. J.
Congress Drives, Div. Tann Corp., 3750 E. Outer Dr., Detroit 34, Mich.
Conklin Brass & Copper Co., Inc., T. E., 54-60 Lafayette St., New York 13, N. Y.
Connecticut State Furnace Co., Inc., 340 Kossuth St., Bridgeport, Conn.
Connery Construction Co., Second & Luzerne Sts., Philadelphia 40, Pa.
Connor Engineering Corp., W. B., Shelter Rock Lane, Danbury, Conn.
Connors & Davis Sales Corp., Circuit Ave., West Springfield, Mass.
Consolidated Industries, Inc., Lafayette, Ind.
Continental Air Filters, Inc., P. O. Box 1647, Louisville 1, Ky.
Continental-Diamond Fibre Co., Newark, Del.
Continental Instrument Co., 1530 St. Clair Ave., Cleveland 14, Ohio.
Continental Products Co., 1150 E. 222nd St., Euclid 17, Ohio.
Continental Screw Co., Mt. Pleasant St., New Bedford, Mass.
Continental Steel Corp., 1108 S. Main St., Kokomo, Ind.
Continental Water Heater Co., 1801 Pasadena Av., Los Angeles 31, Calif.
Controlair Mfg. Co., 1932 S. Compton Av., Los Angeles 11, Calif.
Cook Co., Loren, 664 Front St., Berea, Ohio
Coolerator Co., New Garrick Bldg., Duluth, Minn.
Cooper Co., Clark, Palmyra, N. J.
Cooper Stoker Co., 117 Fourth St., Pittsfield, Mass.
Coopers Creek Chemical Corp., West Conshohocken, Pa.
Copeland Refrigeration Corp., Sidney, Ohio.
Copperweld Steel Co., Box 1000, Glassport, Pa.
Coppus Engineering Corp., 344 Park Ave., Worcester 2, Mass.
Corbin Div., P & F, American Hardware Corp., 67 Park St., New Britain, Conn.
Corbman Bros., Inc., 315 N. 7th St., Philadelphia 6, Pa.
Cordo Chemical Corp., 34 Smith St., Norwalk, Conn.
Cork Insulation Co., Inc., 730 5th Av., New York, N. Y.
Corlett-Turner Co., 1001 S. Kostner Ave., Chicago 24, Ill.
Cornish Wire Co., 50 Church St., New York, N. Y.
Coroaire Heater Corp., 1422 Euclid Ave., Cleveland 15, Ohio.
Corrosite Corp., Chrysler Bldg., New York 17, N. Y.
Cotta Transmission Co., 2340 Eleventh St., Rockford, Ill.
Coughlan Co., G. N., West Orange, N. J.
Coward-Eastman Co., 43 South 23rd, Philadelphia, Pa.
Cox Mfg. Co., Ridgeville, Ind.
Coz-Nef Corp., Bay Street, St. Johnsbury, Vt.
Cramer Co., Inc., The R. W., Box 36, Centerbrook, Conn.
Cramer Mfg. Co., 5110 Westfield Ave., N. W., Canton, Ohio.
Crandall Mfg. Co., 1512 W. Slauson, Los Angeles 44, Calif.
Crane Co., 836 S. Michigan Av., Chicago 5, Ill.
Crary, T. F., 396 N. Second St., Middleport, Ohio.
Crescent Tool Co., 230 Harrison St., Jamestown, N. Y.
Crise Controls Div. Acro Mfg. Co., 2040 E. Main St., Columbus 16, Ohio.
Cristy Specialty Corp., Worcester, Mass.
Crocker-Wheeler Div., Elliott Co., Ampere 1, N. J.
Cromley's, Lewisburg, Pa.
Cross Engineering Co., 160-178 Dundaff St., Carbondale, Pa.
Crowell & Dunn, Inc., 225 Lafayette St., New York, N. Y.
Crown Controls Co., Inc., New Bremen, Ohio.
Crucible Steel Co. of America, 405 Lexington Av., New York 17, N. Y.
Cuno Engineering Corp., 80 S. Vine St., Meridan, Conn.
Cuprometal Mfg. Corp., 44th Ave., & Junction Blvd., Corona, N. Y.
Curtis Refrigerating Machine, Div. Curtis Mfg. Co., 1946 Kienlen Av., St. Louis 20, Mo.
Cutler-Hammer, Inc., 430 N. 12th St., Milwaukee 1, Wis.
Cuyahoga Spring Co., 10254 Berea Road, Cleveland 2, Ohio.
Cyclotherm Div., U. S. Radiator Corp., 157 E. First St., Oswego, N. Y.

D

Daffin Mfg. Co., North Prince St., Lancaster, Pa.
Dahlstrom Machine Works, 4227 W. Belmont Ave., Chicago 41, Ill.
Dahlstrom Metallic Door Co., S. E. Cor. E. Second & Buffalo Sts, Jamestown, N. Y.
Daly, Merritt & Sullivan, Inc., West Broad St., Falls Church, Va.
Dalzen Mfg. Co., 525 S. Riverside, St. Clair, Mich.
Damascus Steel Products Corp., 2215 Kishwaukee St., Rockford, Ill.
Dana Fan & Blower Corp., 3501 Colerain Ave., Cincinnati 23, Ohio.
Daniels Mfg. Co., Inc., Sam, Daniels Rd., Hardwick, Vt.
Danzer Metal Works Co., Box 128, Hagerstown, Md.
Dary Co., W. M., Long Beach, Calif.
Davidson Fan Co., 213 California St., Newton 58, Mass.
Davis Engineering Corp., 1070 E. Grand St., Elizabeth 4, N. J.
Davis Regulator Co., 2546 S. Washtenaw Av., Chicago 8, Ill.
Davis & Son Machine Works, 8426 Compton Av., Los Angeles 1, Calif.
Davison Chemical Corp., 101 N. Charles St., Baltimore 3, Md.
Davison, Inc., Frank D., 428 Aliso St., Los Angeles 12, Calif.
Day Co., 810 Third Av., N. E., Minneapolis 13, Minn.
Day & Night Div., Affiliated Gas Equipment, Inc., P. O. Box 150, Monrovia, Calif.
Dayton Rogers Mfg. Co., 2830 13th Av., S. Minneapolis 7, Minn.
Dayton Rubber Co., 2342 W. Riverview Av., Dayton 1, Ohio.
Dearborn Stove Co., 5830 N. Pulaski, Chicago, Ill.
Dearborn Stove Co., 1700 W. Commerce St., Dallas 8, Texas.
Debevoise Co., 74 20th St., Brooklyn 32, N. Y.
De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Deering Air Cond. Co., 1069 Celestial, Cincinnati, Ohio
Defender Instrument and Regulator Co., 815 Clark Av., St. Louis 2, Mo.
De Hu Matic Air Conditioner Co., 1823 S. Harwood St., Dallas, Texas.
Delavan Mfg. Co., 3007 Sixth Ave., Des Moines 13, Iowa.
Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester 6, N. Y.
Delco Products Div., General Motors Corp., 329 E. First St., Dayton, Ohio.
D'Elia Oil Burner Co., 145 Stratford Ave., Bridgeport 8, Conn.
Delta Heating Corp., 1 Cole St., Trenton 8, N. J.
Delta Mfg. Div., Rockwell Mfg. Co., 620 E. Vienna Ave., Milwaukee 3, Wis.
Deluxe Furnace & Wall Heater Co., 1824 S. Burlington Av., Los Angeles 6, Calif.
DeLuxe Oil Burner Co., 2121 First Av., Seattle, Wash.
Demuth & Sons, Inc., Charles, 245 Elm Pl. Mineola, L. I., N. Y.
Deniston Co., 4856 S. Western Ave., Chicago 9, Ill.
Densewood Corp., Elkhorn, Wis.
Denver Fire Clay Co., 2301 Blake St., Denver 17, Colo.
Dersch, Gesswein & Neuert, Inc., 4849 W. Grand Ave., Chicago 39, Ill.
Deshler Foundry & Machine Works, 140 S. East Ave., Deshler, Ohio.
Des Moines Furnace and Stove Repair Co., 107 S. W. Second Ave., Des Moines 5, Iowa.
DeSoto Oil Burner Corp., 40 N. Penn St., York, Pa.
Despatch Oven Co., 619 Southeast St., Minneapolis 14, Minn.
De-Tec-Tronic Laboratories, Inc., 1227 N. Clark St., Chicago 10, Ill.
Detroit Air Conditioning Service Co., Nashville, Mich.
Detroit Air Filter Div., Air-Maze Corp., 5200 Harvard St., Cleveland 5, Ohio.
Detroit Controls Corp., 5900 Trumbull Ave., Detroit 8, Mich.
Detroit Hoist & Machine Co., 8202 Morrow St., Detroit 11, Mich.

Detroit Moulding Div., L. A. Young Spring & Wire Corp., 9210 Russell St., Detroit 11, Mich.
Detroit Regulator Co., 1742 Rivard St., Detroit 7, Mich.
Detroit Safety Furnace Pipe Co., 5960 Second Blvd., Detroit 2, Mich.
Detroit Stamping Co., 350 Midland Ave., Detroit 3, Mich.
Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit 11, Mich.
Detroit Stoker Co., General Motors Bldg., Detroit 2, Mich.
Devices, Inc., 214 E. 53rd St., New York, N. Y.
DeVilbiss Co., The, 300 Phillips Ave., Toledo 1, Ohio.
Devine Mfg. Co., J. P., Div. of H. K. Porter Co., Inc., 1932 Oliver Bldg., Pittsburgh 22, Pa.
Devoe & Raynolds Co., Inc., 44th St. & 1st Ave., New York 17, N. Y.
Diamond Castings Co., Terra Cotta Rd., Johnsonburg, Pa.
Diamond Expansion Bolt Co., Inc., 500 North Ave., Garwood, N. J.
Diamond Iron Works, Inc., 1728 Second St., N., Minneapolis 11, Minn.
Diamond Machine Tool Co., 3429 E. Olympic Blvd., Los Angeles 23, Calif.
Diamond Mfg. Co., 243 W. 8th St., Wyoming, Pa.
Diceler Div., General Machine & Mfg. Co., Berwick, Pa.
Dick Co., Inc., R. & J., 24-28 Sade St., Passaic, N. J.
Dickson Co., 7420 Woodlawn Ave., Chicago 19, Ill.
Dickson Weatherproof Nail Co., P. O. Box 590, Evanston, Ill.
Dieckmann Co., Ferdinand, 1180 Harrison Ave., Cincinnati 22, Ohio
Diehl Mfg. Co., 1117 Finderne Av., Somerville, N. J.
Diener Mfg. Co., Geo. W., 400 N. Monticello Av., Chicago 24, Ill.
Dietz Co., Henry G., 12-16 Astoria Blvd., Long Island City 2, N. Y.
Disston & Sons, Inc., Henry, Unruh & Milnor Sts., Philadelphia 35, Pa.
Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
DoAll Co., 254 Laurel Ave., Des Plaines, Ill.
Dockson Corp., 3839 Wabash Av., Detroit 8, Mich.
Dodge Mfg. Corp., 500 S. Union St., Mishawaka, Ind.
Doelger & Kirsten, Inc., 3015 W. Chambers St., Milwaukee 10, Wis.
Dole Valve Co., 1933 W. Carroll Ave., Chicago 12, Ill.
Dollinger Corp., 11 Centre Park, Rochester 3, N. Y.
Domestic Devices, 1495 Warrensville Center Rd., Cleveland, Ohio.
Domestic Mfg. Co., 201 Westlake, N., Seattle 1, Wash.
Dongan Electric Mfg. Co., 2981 Franklin St., Detroit 7, Mich.
Dormeyer Industries, 3418 Milwaukee Ave., Chicago 41, Ill.
Dornback Furnace & Foundry Co., 724 E. 105rd St., Cleveland 8, Ohio.
Dow Chemical Co., Midland, Mich.
Dowagiac Steel Furnace Co., Beeson St., Dowagiac, Mich.
Downs-Smith Brass & Copper Co., Inc., 304-320 E. 45th St., New York 17, N. Y.
Doyle & Roth Mfg. Co., Foot of 23rd St., Brooklyn 32, N. Y.
Doyle Vacuum Cleaner Co., 225 Stevens St., S. W., Grand Rapids 2, Mich.
Dravo Corp., Dravo Bldg., Pittsburgh 22, Pa.
Drayer-Hanson, Inc., Box 2215, Terminal Annex, Los Angeles 54, Calif.
Dreis Co., Ltd., Edward J., 841 County Rd., San Carlos, Calif.
Dreis & Krump Mfg. Co., 7404 Loomis Blvd., Chicago 36, Ill.
Drico Industrial Corp., 559 W. 35th St., New York 1, N. Y.
Drying Systems, Inc., 1812½ W. Foster Ave., Chicago 40, Ill.
Dual-Air Fan Corp., P. O. Box 169, South Elgin, Ill.
Dual Remote Control Co., Garden City, Mich.
Dualtron Co., 322 Perry Hwy., Pittsburgh 29, Pa.
Ducane Heating Corp., Lincoln Park, N. J.
Dunn-Rite Products, P. O. Box 297, Garden City, Mich.
Duo-Therm Div., Motor Wheel Corp., Lansing 3, Mich.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
Durex, Inc., 5252 Broadway, Chicago 40, Ill.
Duro-Dyne Corp., 38 S. Franklin St., Hempstead, L.I., N.Y.
Dust Suppression & Engineering Co., 154 Grove St., Lake Orion, Mich.
Dwyer Mfg. Co., F. W., 317 S. Western Av., Chicago 12, Ill.

E

Eagle Chemical Co., Inc., P. O. Box 1221, Joliet, Ill.
Eagle-Picher Co., American Bldg., Central Pkwy. & Walnut, Cincinnati 1, Ohio.
East Coast Co., 141 Milk St., Boston 9, Mass.
Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17, N. Y.
Eastern Oil & Equipment Co., 27 Portland St., Portland 1, Maine.
Eastern Stainless Steel Corp., P. O. Box 1975, Baltimore 3, Md.
Easyheet Inc., 1601 Eastlake Av., Seattle 2, Wash.
Eav-Tex Co., 307 Lincoln Av., Havertown, Pa.
Ebco Mfg. Co., 401 W. Town St., Columbus 8, Ohio.
Eckhart Mfg. Co., Inc., 931 Lehigh Av., P. O. Box 248, Union, N. J.
Eclipse Air Brush Co., 390 Park Ave., Newark 7, N. J.
Eclipse Fuel Engineering Co., 1017 Buchanan St., Rockford, Ill.
Economo Gas Products Co., 8832 Michigan Av., Detroit 10, Mich.
Eddington Metal Specialty Co., P. O. Box K, Eddington, Pa.
Eddy Stoker Corp., 4717 W. North Av., Chicago 39, Ill.
Edwards Mfg. Co., Inc., 337 Eggleston Av., Cincinnati 2, Ohio.
Efsco Products Co., 116 Walton St., Syracuse, N. Y.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Eisbach, Albert N., 755 Central, Dubuque, Iowa.
Eisler Engineering Co., 761 S. 13th St., Newark 3, N. J.
Elco Tool & Screw Corp., 1800 Broadway, Rockford, Ill.
Electric Arc, Inc., 152 Jeliff Av., Newark 8, N. J.
Electric Controller & Mfg. Co., 2700 E. 79th St., Cleveland 4, Ohio.
Electric Furnace-Man, Inc., 4th & Furnace Sts., Emmaus, Pa.
Electric Machinery Mfg. Co., 1137 Tyler St., N. E., Minneapolis 13, Minn.
Electric Motor Corp., Div. Howard Industries, Inc., Racine, Wis.
Electric Soldering Iron Co., Inc., W. Elm St., Deep River, Conn.
Electric Spravit Co., 1415 Illinois Av., Sheboygan, Wis.
Electriglas Corp., Bergenfield, N. J.
Electrimatic Co., Affil., Jas. P. Marsh Corp., Skokie, Ill.
Electro Dustless Painting, Inc., 1052 New Britain Av., Elmwood 10, Conn.
Electroaire Corp., 37-40 12th St., Long Island City 1, N. Y.
Electro Dynamic Div., Electric Boat Co., Bayonne, N. J.
Electro Lift, Inc., 32 Church St., New York 7, N. Y.
Electro-Watt Inc., Mercer & Aurora, Seattle 9, Wash.
Electrol Burner Mfg. Co., Inc., 22 Union Av., Rutherford, N. J.
Electromode Corp., 45 Crouch St., Rochester 3, N. Y.
Electronic Products Co., St. Charles, Ill.
Electrovent Corp., 5245 Western Av., Detroit 10, Mich.
Electrovent Fan & Mfg. Co., 812 W. Lake St., Chicago 7, Ill.
Elgo Shutter & Mfg. Co., 2738 W. Warren Av., Detroit 8, Mich.
Ellison Draft Gage Co., 348 W. Monroe St., Chicago 6, Ill.
Elmwood Mfg. Co., 3145 Chestnut St., Detroit 7, Mich.
Elwell-Parker Elec. Co., 4131 St. Clair, Cleveland 3, Ohio.
Emerson Electric Mfg. Co., 8100 Florissant Av., St. Louis 21, Mo.
Empire Chemical Products Co., 10 Longworth St., Newark, N. J.
Empire Door Co., Inc., 431 Southern Blvd., New York 55, N. Y.
Empire Metal Co., 820 E. Water St., Syracuse, N. Y.
Empire Stove Co., Belleville, Ill.
Empire Ventilation Equipment Co., 35-129 Vernon Blvd., Long Island City 1, N. Y.
Enderle, Inc., Ltd., Frank X., 1715 San Fernando Rd., Los Angeles 65, Calif.
Engelhard, Inc., Chas., 900 Passaic Av., East Newark, N. J.
Engineering Industries Co., Ltd., 650 Dupont St., Toronto, Ont., Canada.
Enico Products, 16573 Littefield Av., Detroit, Mich.
Enterprise Foundry, Inc., 1123 E. "B" St., Belleville, Ill.
Equi-Dyne, Inc., 5729 W. Ohio, Chicago 44, Ill.
Erdle Perforating Co., 171 York St., Rochester 11, N. Y.
Ergolyte Mfg. Co., 3627 N. Lawrence St., Philadelphia 40, Pa.
Erickson Specialty Co., 10 Cayuga St., P. O. Box 141, Cohoes, N. Y.
Eselgroth & Co., 22 Edison Pl., Newark 2, N. J.
Ess Instrument Co., 96 S. Washington Ave., Bergenfield, N. J.
Essick Mfg. Co., 1950 Santa Fe Av., Los Angeles 21, Calif.
Eston Chemicals Div., American Potash & Chemical Corp., 3100 E. 26th St., Los Angeles, Calif.
Etched Products Co., 3901 Queens Blvd., Long Island City 4, N. Y.
Euclid Crane & Hoist Co., 1365 Chardon Rd., Euclid 17, Ohio.
Eutectic Welding Alloys Corp., 40-40 172nd St., Flushing, N. Y.
Evans Products Co., Heating & Appliance Div., Plymouth, Mich.
Even-Air Mfg. & Sales Co., 13931 Hamilton Av., Detroit 3, Mich.
EverHot Heater Co., 5189 Wesson Av., Detroit 10, Mich.
Everhot Mfg. Co., 57 S. 19th Av., Maywood, Ill.
Everhot Products Co., 2059 W. Carroll Av., Chicago 12, Ill.
Eveready Supply Co., 3207 Gaston Av., Dallas 2, Texas.
Excel Heating & Air Conditioning Co., 3715 Belmont Av., Chicago 18, Ill.
Excelsior Steel Furnace Co., 118 S. Clinton St., Chicago 6, Ill.
Excelsior Stove & Mfg. Co., 510 S. Front St., Quincy, Ill.
Excelsior Tool & Machine Co., 31st & Ridge Av., East St. Louis, Ill.

Expert Welding Machine Co., 17144 Mt. Elliott St., Detroit, Mich.

F

F & E Mfg. Co., Box D, Centerville, Calif.
Fafnir Bearing Co., The, 37 Booth St., New Britain, Conn.
Fairbanks, Morse & Co., 600 S. Michigan Av., Chicago 5, Ill.
Fairfield Oil Heating Co., Inc., Greenwich, Conn.
Fairmont Aluminum Co., P. O. Box 912, Fairmont, W. Va.
Fairmount Tool & Forging Co., 10611 Quincy Av., Cleveland 6, Ohio.
Fallsington Mfg. Co., Fallsington, Pa.
Falstrom Co., 18 Falstrom Court, Passaic, N. J.
Famco Machine Co., 3114 Sheridan Rd., Kenosha, Wis.
Famous Furnace Co., 6420 Woodland Ave., Cleveland 4, Ohio.
Fano-Flame Oil Burner Co., 3323 Olive St., Huntington Park, Calif.
Farquhar Furnace Co., 230 Owens Av., Wilmington, Ohio.
Farr Co., Box 10187, Airport Sta., Los Angeles 45, Calif.
Farrelloy Co., 1243 N. 26th St., Philadelphia 21, Pa.
Farris Engineering Corp., 400 Commercial Ave., Palisades Park, N. J.
Farris Furnace Co., 920-930 Enos Av., Springfield, Ill.
Fasco Industries, Inc., Box 509, Rochester 2, N. Y.
Faultless Heater Corp., 10217 St. Clair Av., Cleveland, Ohio.
Favorite Stove Co., 440 Weber St., Piqua, Ohio.
Fedders-Quigan Corp., 57 Tonawanda St., Buffalo 7, N. Y.
Federal Machine & Welder Co., Overland Ave., Warren, Ohio.
Federal Machinery Co., 134 Grand St., New York 13, N. Y.
Federated Metals Div., American Smelting and Refining Co., 120 Broadway, New York 5, N. Y.
Fee & Mason Mfg. Co., Manasquan, N. J.
Fee & Stemwedel, Inc., 2210 Wabansia Av., Chicago 47, Ill.
Felters Co., Inc., 210 South St., Boston 11, Mass.
Fenway Machine Sales Co., Inc., 20 S. 15th St., Philadelphia 2, Pa.
Ferdon Equipment Engineering Co., 26 Evans Place, Hillside, N. J.
Fern, Ralph, 2517 Boulevard Av., Scranton 9, Pa.
Field Control Div., H. D. Conkey & Co., Drawer 11, Mendota, Ill.
Fieser Co., F. J., 54 W. 21st St., New York 10, N. Y.
Fiege Co., 1734 W. Ogden Av., Chicago 12, Ill.
Filkins, Inc., Edward, 9 S. Clinton St., Chicago 6, Ill.
Finger, Joe, 7907 Madison Av., Cleveland 2, Ohio.
Fingles Co., Reisterstown Rd. at Elgin Av., Baltimore 17, Md.
Finn Engineers, Inc., Jerry, 634 Grand Ave., St. Paul 5, Minn.
Firecraft Corp., 3110 W. 51st St., Chicago 32, Ill.
Fireline Stove & Furnace Lining Co., 1816 Kingsbury St., Chicago 14, Ill.
Firestone Tire & Rubber Co., Firestone Park, Akron 17, Ohio.
Firewel Co., Inc., 3685 Broadway, Buffalo 25, N. Y.
Fisher Brass Foundry, 5332 S. Santa Fe Ave., Los Angeles 11, Calif.
Fisher Governor Co., 203 First Av., Marshalltown, Iowa.
Flagler Corp., The, 19321 Filer Ave., Detroit, Mich.
Flame-Master Co., 6651 N. Clark St., Chicago, Ill.
Flemm Lead Co., Inc., Bradley Av. & School St., Long Island City 1, N. Y.
Flexible Tubing Corp., Guilford, Conn.
Flexonics Corp., 1315 S. Third Ave., Maywood, Ill.
Flintkote Co., 30 Rockefeller Plaza, New York 20, N. Y.
Flood Co., Hudson, Ohio.
Floral City Heater Co., 402 S. Monroe St., Monroe, Mich.
Florence Stove Co., 205 School St., Gardner, Mass.
Floridin Co., Drawer 148, Warren, Pa.
Fluid Heat Div. Anchor Post Products, Inc., 6720 Eastern Av., Baltimore 24, Md.
Fluor Corp., Ltd., The, 2500 S. Atlantic Blvd., Los Angeles 22, Calif.
Flynn & Emrich Co., 301 Holliday St., Baltimore 2, Md.
Follansbee Steel Corp., Third & Liberty Avs., Pittsburgh 30, Pa.
Folsom Snow Guard Co., 336 Union St., Millis, Mass.
Foote Foundry Co., J. B., N. Main St., Fredericktown, Ohio.
Ford Blow Pipe & Mfg. Co., 285 Poplar Av., Memphis 1, Tenn.
Ford Chain Block Div., American Chain & Cable Co., Inc., York, Pa.
Ford Motor Co., Dearborn, Mich.
Forest City Foundries Co., Niagara Furnace Div. 2500 W. 27th St., Cleveland 13, Ohio.
Fossum Mfg. Co., M. H. 1565 Como Av., St. Paul, Minn.
Foster Engineering Co., 835 Lehigh St., Union, N. J.
Foster Wheeler Corp., 165 Broadway, New York 6, N. Y.
Fox Noiseless Hammer Co., 77 Green Hill Rd., Media, Pa.
Foxboro Co., 38 Neponset Ave., Foxboro, Mass.
Fram Corp., Providence 16, R. I.
Franck & Fric, 7109 Kinsman Rd., Cleveland 4, Ohio.
Frankland Corp., 2640 Goodrich Ave., Ferndale, Mich.
Franklin Electric Co., Inc., E. Spring St., Bluffton, Ind.
Fraser & Johnston Co., 1900 17th St., San Francisco 3, Calif.
Frayn Co., N. J., P. O. Box 1005, Redwood City, Calif.
Frederick Iron & Steel, Inc., Frederick, Md.
Freed Heater & Stoker Co., Topton, Pa.
Freed Products Co., 1510 Third Ave., Moline, Ill.
Freeport Burner & Fan Co., Freeport, Ill.
Fresh Air Circulator Co., 3108 Navigation, Houston 3, Texas.
Fresh'nd-Aire Co., 221 N. LaSalle St., Chicago 1, Ill.
Frey & Co., Frank P., 2634 W. Madison St., Chicago 12, Ill.
Frick Co., W. Main St., Waynesboro, Pa.
Friedley-Voshart Co., 763 W. Lexington St., Chicago 7, Ill.
Friendly Furnace & Foundry Co., 2405 E. Fourth St., Sioux City 19, Iowa.
Friez Instrument Div., Bendix Aviation Corp., 1400 Taylor Av., Baltimore 4, Md.
Frigidaire Div., General Motors Corp., 300 Taylor St., Dayton, 1, Ohio.
Front Rank Furnace Co., Div. Liberty Foundry Co., 2500 Ohio Av., St. Louis 4, Mo.
Fry Reglet Corp., 1725 N. Pennsylvania Ave., P. O. Box 411, Bremerton, Wash.
Fuel Savers, Inc., 1501 Herr St., Harrisburg, Pa.
Fuelguard Co., 5643 Dyer St., Dallas 6, Texas.
Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Box 400, Knoxville 4, Tenn.
Furblo Co., Hermansville, Mich.
Furnas Electric Co., Batavia, Ill.
Fusion Engineering, 4504 Superior Ave., Cleveland 3, Ohio.

G

G. M. Mfg. Co., 50 W. Third St., New York 12, N. Y.
G. & O. Mfg. Co., 138 Winchester Av., New Haven 8, Conn.
G. & S. Machine Shop, 8700 Grinnell, Detroit 13, Mich.
Gallaher Co., Omaha, Nebr.
Galvan Mfg. Co., Box 267, New Albany, Ind.
Galvanite Corp., 40 W. 29th St., New York 1, N. Y.
Gammeter Co., W. F., Lincoln Av., Cadiz, Ohio.
Garden City Fan Co., 332 S. Michigan Blvd., Chicago 4, Ill.
Garden City Laboratory, Div. Pritchardsons, 2744 W. 37th Pl., Chicago 32, Ill.
Gary Steel Products Co., 4400 W. 9th St., Gary, Ind.
Gas Arc Supply, 223 N. 16th St., Philadelphia 2, Pa.
Gasco Industries, Inc., 2054 National Bank Bldg., Detroit 26, Mich.
Gas & Oil Industry Laboratories, Inc., 4 Paine Av., Irvington 11, N. J.
Gates & Co., Inc., George W., Hempstead Tpke & Lucille Ave., Franklin Sq., L. I., N. Y.
Gates Rubber Co., 999 S. Broadway, Denver 17, Colo.
Gaul Air Conditioner Co., 3116 N. Main St., Dayton 5, Ohio.
Gehri Co., 1117 Tacoma Ave., Tacoma 3, Wash.
Geisel Mfg. Inc., 61 West Av., Elyria, Ohio.
Gematic Burner Co., 16830 Miles Av., Cleveland 22, Ohio.
General Automatic Products Corp., 2300 Sinclair Lane, Baltimore, Md.
General Blower Co., 8600 Ferris Av., Morton Grove, Ill.
General Blower Co., Inc., 6137 Market St., Philadelphia 39, Pa.
General Ceramics & Steatite Corp., Keasbey, N. J.
General Controls Co., 801 Allen Av., Glendale 1, Calif.
General Die and Stamping Co., 262 Mott St., New York 12, N. Y.
General Electric Co., Small Appliance Div., 1285 Boston Av., Bridgeport 2, Conn.
General Electric Co., Air Cond. Div., 5 Lawrence St., Bloomfield, N. J.
General Electric Co., Carboloy Dept., 11177 E. Eight Mile Rd., Detroit 32, Mich.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
General Electric Co., 1 River Rd., Schenectady 5, N. Y.
General Electric Co., Lamp Div., Nela Park, Cleveland 12, Ohio.
General Engineering Co., Bay City, Mich.
General Filters, Inc., 12890 Westwood Av., Detroit 23, Mich.
General Fittings Co., 123 Georgia Ave., Providence 5, R. I.
General Gas Light Co., 202 N. Park St., Kalamazoo 11F, Mich.
General Machinery Co., 3500 Riverside Av., Spokane 1, Wash.
General Oil Heating Corp., 322-6 55th St., West New York, N. J.
General Plate Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
General Products Co., Fredericksburg, Va.
General Scientific Equipment Co., 27th & Huntington Sts., Philadelphia 32, Pa.

General Sheet Metal Works, Inc., Silliman Av. & Ash St., Bridgeport 5, Conn.
General Water Heater Corp., Front St., & Magnolia Blvd., Box 471, Burbank, Calif.
Gerett Corp., M. A. 724 W. Winnebago St., Milwaukee 5, Wis.
Gerhardt, W. F., 2007 W. Broad St., Richmond 20, Va.
Gerhardt Co., Inc., George T., P. O. Box 546, Sausalito, Calif.
Germatrol Corp., 622 Brookline Blvd., Pittsburgh 26, Pa.
Gerrard & Co., A. J, 1950 Hawthorne Ave, Melrose Park, Ill.
Gerstein & Cooper Co., Inc., 1 W. 3rd St., South Boston, Mass.
Gerwin Industries, 214 Spring St., Michigan City, Ind.
Giannini & Co., Inc., G. M., 254 W. Colorado St., Pasadena 1, Calif.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
Gillen Co., J. L., 12202 Wormer Ave., Detroit 28, Mich.
Gilmore & Co., Jackson G., 167 E. State St., Columbus 15, Ohio.
Gisholt Machine Co., 1253 E. Washington Av., Madison 10, Wis.
Glasby Mfg. Co., Inc., J. P., Montgomery & Willett Sts., Belleville 9, N. J.
Glaser Lead Co., Inc., 31 Wyckoff Av., Brooklyn 37, N. Y.
Glasfloss, 155 E. 44th St., New York 17, N. Y.
Glidden Co., 11001 Madison Av., Cleveland 2, Ohio.
Globe Machinery & Suppiy Co., E. 1st & Court Av., Des Moines 6, Iowa.
Globe Roofing Products Co., Inc., 2207 Schrage Av., Whiting, Ind.
Godier Incinerator Corp., 407 S. Dearborn, Chicago 5, Ill.
Goergen-Mackwirth Engineering Co., 813 Sycamore St., Buffalo 12, N. Y.,
Goethel Sheet Metal Works, Inc., Alfred, 3218 W. Fond du Lac Av., Milwaukee 10, Wis.
Golden Gate Sheet Metal Works, 1422 14th Ave., Oakland 6, Calif.
Golden's Foundry & Machine Co., P. O. Box 96, Columbus, Ga.
Goldsmith Metal Lath Co., 4501 Chickering Ave., Cincinnati 32, Ohio.
Goodfellow Co., E. D., 496 E. Bodley Ave., Memphis, Tenn.
Goodfriend Plumbing & Heating Burner Sales, 13931 Hamilton, Detroit, Mich.
Goodrich Co., B. F., 500 S. Main St., Akron, Ohio.
Goodyear Tire & Rubber Co., Inc., 1144 E. Market St., Akron 16, Ohio.
Goss Gas, Inc., Rt. 8, Glenshaw, Pa.
Gouran, Mark F., 7309 Boyer St., Philadelphia 19, Pa.
Governair Corp., 513 N. Blackwelder, Oklahoma City 4, Okla.
Graham Hambly Co., 3625 S. Grand Av., Los Angeles 7, Calif.
Grand Island Furnace & Supply Co., 356 N. Elm St., Grand Island, Nebr.
Grand Rapids Wire Products Co., 503 Front Av., N. W., Grand Rapids 4, Mich.
Granite City Steel Co., 20th & Madison Av., Granite City, Ill.
Gray, G. L., 295 East St., P. O. Box 520, New Haven 3, Conn.
Gray & Dudley Co., 2300 Clifton Rd., Nashville, Tenn.
Gray Metal Products, Inc., 30 Carleton St., Rochester 3, N. Y.
Grayson-Greenamyer, Inc., P. O. Box 88, Monrovia, Calif.
Gray-Wilson Co., 6460 Kercheval Av., Detroit 7, Mich.
Great National Air Conditioning Corp., Sub. U. S. Air Conditioning Corp., 342 Oklahoma Natural Bldg., Oklahoma City, Okla.
Green Colonial Furnace Co., 322 S. W. Third St., Des Moines 7, Iowa.
Green Fire Brick Co., A. P., Mexico, Mo.
Greenberg's Sons, M., 765 Folsom St., San Francisco 7, Calif.
Greene, Tweed & Co., North Wales, Pa.
Griswold Mfg. Co., 1001-1065 W. 12th St., Erie, Pa.
Grob Bros., Grafton, Wis.
Gross-Aire Mfg Co., 9416 W. Milton Ave., St. Louis 14, Mo.
Grove Regulator Co., 6529 Hollis St., Oakland, Calif.
Guardian Electric Mfg. Co., 1621 W. Walnut St., Chicago 12, Ill.
Guardian Products Corp., 1215 E. 2nd St., Michigan City, Ind.
Gustin-Bacon Mfg. Co., 210 West 10th St., Kansas City 7, Mo.

H

H. A. Mfg. Co., 1612 W. King St., York, Pa.
H-B Instrument Co., 2633 Trenton Ave., Philadelphia 25, Pa.
H & H Research Co., 6303 Horatio Ave., Detroit 10, Mich.
H-P Products, Inc., 510 W. Broad St., Louisville, Ohio.
H P L Mfg. Co., 15210 Miles Av., Cleveland 28, Ohio.
Haertel Co., Walter, 2840 - 4th Ave., S., Minneapolis, Minn.
Hago Products, 1281 Springfield Ave., Irvington 11, N. J.
Hague & Co., Alfred, 224 34th St., Brooklyn 32, N. Y.
Haines Gauge Co., Inc., 2301 W. Allegheny Av., Philadelphia 32, Pa.
Hall-Neal Furnace Co., 1326 N. Capitol Ave., Indianapolis 7, Ind.
Hallemite Mfg. Co., 2446 W. 25th St., Cleveland, Ohio.
Hallmor, Inc., McMurray Rd., Bridgeville, Pa.
Halstead & Mitchell, Bessemer Bldg., Pittsburgh 22, Pa.
Hamilton Tool Co., Ninth St. at Hanover, Hamilton, Ohio.
Hamler Boiler & Tank Co., 6025 W. 66th St., Chicago, Ill.
Hammel Radiator Engineering Co., 3348 Motor Av., Los Angeles 34, Calif.
Hammett Electric Mfg. Co., 706 E. Eighteenth St., Kansas City 8, Mo.
Hammond Machinery Builders, Inc., 1694 Douglas Av., Kalamazoo 54, Mich.
Hampton Electric Mfg. Co., 1238 Voskamp St., Pittsburgh 12, Pa.
Handees Co., Dept. R-161, Bloomington, Ill.
Handelan Washed Air Co., 4006 Washburn Av., South, Minneapolis, Minn.
Handley-Brown Heater Co., 2501 Brooklyn Rd., Jackson, Mich.
Handy & Harman, 82 Fulton St., New York 38, N. Y.
Haney Gas Burner & Engrs., 909 S. Myrtle Ave., Monrovia, Calif.
Hanlan Co., 1416 W. Jefferson Blvd., Los Angeles 7, Calif.
Hanovia Chemical & Mfg. Co., 100 Chestnut St., Newark 5, N. J.
Hansen Gas & Electric Co., 680 Valencia St., San Francisco 10, Calif.
Harnischfeger Corp., 4400 W. National Ave., Milwaukee 14, Wis.
Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, Ill.
Harrington Co., The, 1640 W. Callowhill St., Philadelphia 30, Pa.
Harrington & King Perforating Co., 5649 Fillmore St., Chicago 44, Ill.
Harris, A. R., 4546 Hohman Ave., Hammond, Ind.
Harris Calorific Co., 5501 Cass Av., N. W., Cleveland 2, Ohio.
Harris Machinery Co., 501 30th Ave., S. E., Minneapolis 14, Minn.
Harrison Sheet Steel Co., 4718 W. Fifth Av., Chicago 44, Ill.
Harrison Steel Cabinet Co., 4718 W. 5th Ave., Chicago, Ill.
Harry Cooling Towers, Inc., 125 Cedar St., New York 6, N. Y.
Hart & Cooley Mfg. Co., 500 E. Eighth St., Holland, Mich.
Hart & Crouse Corp., 109 N. Warner St., Oneida, N. Y.
Hart Furnace and Supply Co., 238 E. Main St., Louisville 2, Ky.
Hart Heat Div., Avery Farm Machinery Co., 2006 S. Washington St., Peoria 2, Ill.
Hart Mfg. Co., Bartholomew & Hamilton Sts., Hartford 1, Conn.
Hart-Mun Furnace Co., 2507 E. 15th St., Tulsa 5, Okla.
Hartzell Propeller Fan Co., Div. Castle Hills Corp., 1025 Roosevelt Av., Piqua, Ohio.
Harvey Machine Co., Inc., 19200 S. Western Av., Torrence, Calif.
Harvey, Inc., Sid, 100 E. Mineola Av., Valley Stream, N. Y.
Harvey-Whipple, Inc., 55 Emery St., Springfield 1, Mass.
Hasko Utilities Co., 879 Tenth Ave., New York 19, N. Y.
Haskins Co., R. G., 2651 W. Harrison St., Chicago 12, Ill.
Hassall, Inc., John, Clay & Oakland Sts., Brooklyn 22, N. Y.
Hastings Air Conditioning Co., Inc., Box 474, 108 S. Colorado Av., Hastings, Nebr.
Hastings Instrument Co., Inc., Superhighway at Pine Ave., Hampton, Va.
Hauck Mfg. Co., 124-136 Tenth St., Brooklyn 15, N. Y.
Hauserman Co., E. F., 6800 Grant Av., Cleveland 5, Ohio.
Haveg Corp., Newark, Del.
Havens Structural Steel Co., 1713 Crystal Ave., Kansas City, Mo.
Hayes Furnace & Mfg. Co., 2929 S. Fairfax Ave., Los Angeles 16, Calif.
Hays Corp., 782 E. Eighth St., Michigan City, Ind.
Hays Mfg. Co., 801 W. 12th St., Erie 6, Pa.
Health Trola Div., Excel Heating & Air Cond. Co., 3715 Belmont Ave., Chicago 18, Ill.
Healy-Ruff Co., 765 Hampten Av., St. Paul 4, Minn.
Heartley Machine & Tool Co., 900-8 Summit St., Toledo, Ohio.
Heatcraft Co., 419 W. Main St., Louisville 2, Ky.
Heating Assurance, Inc., 124 E. Augusta Av., Spokane 13, Wash.
Heating Equipment Mfg Co., 600 Indiana St., San Francisco 7, Calif.
Heating Specialties Co., Carroll P. O., Baltimore 29, Md.
Heatlox Furnaces, Inc., 4320 S. Tacoma Way, Tacoma 9, Wash.
Heat-Seal Burner Co., 2018 Cuming Av., Omaha 2, Nebr.
Heat-Timer Corp., 520 Broadway, New York 12, N. Y.
Heat-X-Changer Co., The, Brewster, N. Y.
Heetrliter Co., 208 S. Blaine St., Newberg, Ore.
Hegeler Zinc Co., P. O. Box 599, Danville, Ill.
Heil Co., 3000 W. Montana St., Milwaukee 1, Wis.
Hemp & Co., Inc., Macomb, Ill.
Hemphill Co., A. D., Lake City, Minn.
Henderson & Co., Peter, 35 Cortland St., New York 7, N. Y.
Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Hendley & Whittemore Co., 6 Blackhawk Blvd., Beloit, Wis.
Hendrick Mfg. Co., 37 Dundaff St., Carbondale, Pa.
Henkel-Clauss Co., Fremont, Ohio.
Henry Furnace Co., Medina, Ohio
Henry Valve Co., Melrose Park, Ill.

Henry & Wright Div., Emhart Mfg. Co., 760 Windsor St., Hartford 1, Conn.
Herco Oil Burner Corp., 131-135 Locust St., Lancaster, Pa.
Hercules Chemical Co., Inc., 332 Canal St., New York 13, N. Y.
Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Av., Brooklyn 7, N. Y.
Herd Utilities, Inc., 303 Canal St., Providence 3, R. I.
Heremetal Co., 1310 Aldrich Av., N., Minneapolis 11, Minn.
Herron-Zimmers Molding Co., 3900 E. Outer Drive, Detroit, Mich.
Hershey Machine & Foundry Co., Manheim, Pa.
Hess-Snyder Co., Massillon, Ohio.
Hess Co., The, 1855 S. 54th Ave., Chicago 50, Ill.
Hetzel Roofing Products Co., 67 Main St., Newark 5, N. J.
Hexacon Electric Co., 275 W. Clay Ave., Roselle Park, N. J.
Hexdall, A. M., Morris, Ill.
Highland Engineering Co., 1742 Berkeley St., Santa Monica, Calif.
Highside Chemicals Co., 10 Colfax Ave., Clifton, N. J.
Hill & Co., E. Vernon, 6829 W. Highland Ave., Chicago 31, Ill.
Hillwood Mfg. Co., 21700 St. Clair Av., Cleveland 17, Ohio.
Hilo Varnish Corp., 376 Third St., Everett 49, Mass.
Hinde & Dauch Paper Co., P. O. Box 861, Sandusky, Ohio.
Hi-Qua Mfg. Co., 4709 Griscom St., Philadelphia 24, Pa.
Hirsh Mfg. Co., P. O. Box 265, Garland, Texas.
Hirschman-Pohle Co., Inc., 9 Lent Av., LeRoy, N. Y.
Hobart Bros. Co., Canal Lock Square, Troy 1, Ohio.
Hobsite Products Co., Inc., 308 Sussex St., Harrison, N. J.
Hodell Chain Co., 3924 Cooper Av., Cleveland 3, Ohio.
Holden Fan Co., 2503 Danforth, Detroit 12, Mich.
Hollup Corp., Div. National Cylinder Gas Co., 4700 W. 19th St., Chicago 50, Ill.
Holly Mfg. Co., 875 S. Arroyo Parkway, Pasadena 2, Calif.
Holtzer-Cabot Div. National Pneumatic Co., Inc., 125 Amory St., Boston 19, Mass.
HomEase Products Div., Bogue Electric Co., Inc., 52 Iowa Av., Paterson 3, N. J.
Home Furnace Co., 280 E. 6th St., Holland, Mich.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Hones, Inc., Charles A., 122 S. Grand Av., Baldwin, N. Y.
Hook & Ackerman, Inc., 18 E. 41st St., New York 17, N. Y.
Hook & Miller, 130 Latham St., Pittsburgh 6, Pa.
Horn Co., Inc., A. C. 10th St. & 44th Av., Long Island City 1, N. Y.
Horsman-Markin Corp., 2063 Penobscot Bldg., Detroit 26, Mich.
Hossfeld Mfg. Co., 460 W. Third St., Winona, Minn.
Hotentot Co., Inc., 2423 Farnham St., Omaha 2, Nebr.
Hotpoint, Inc., 5600 W. Taylor St., Chicago 44, Ill.
Hotstream Heater Co., 2363 E. 69th St., Cleveland 4, Ohio.
Houston Blow Pipe & Sheet Metal Works, 113 Broadway, Houston 1, Texas.
Howard Iron Wks. & Alberger Heater Div., 287 Chicago St., Buffalo 4, N. Y.
Howe Ice Machine Co., 2825 Montrose Av., Chicago 18, Ill.
Howell Engineering Corp., P. O. Box 111, Oregon, Ill.
Howes-Woods Co., 210 Bridge St., Cambridge 41, Mass.
Hoyt Heater Co. of No. Calif., 926 High St., Oakland, Calif.
Hub Specialty Co., 53 Salem St., Reading, Mass.
Hubbell Corp., Box 700, Hawley Rd., Mundelein, Ill.
Huck Mfg. Co. 2480 Bellevue Av., Detroit 7, Mich.
Hugert Mfg. Co., Rt. 3 & Chippewa Lake Rd., Medina, Ohio.
Hunt Heater Corp., 220 Twelfth Ave., N., Nashville, Tenn.
Hunt & Son, Inc., C. B, Salem, Ohio
Hunter Fan & Ventilating Co., 400 S. Front St., Memphis 2, Tenn.
Hupp Corp., Globe Stamping Div., 1250 W. 76th St., Cleveland 2, Ohio.
Hussey & Co., C. G., 2850 Second Av., Pittsburgh 19, Pa.
Hutchinson Burner & Mfg. Co., 517 N. Main, Hutchinson, Kans.
Huwer Heating Corp., R. R. 2, Milford, Mich.
Hyman & Sons, Joseph, Tioga, Livingston and Almond St., Philadelphia 34, Pa.
Hynes & Cox Electric Corp., Cohoes Rd. & Elm St., Watervliet, N. Y.

I

Ideal Electric & Mfg. Co., E. First & Oak Sts., Mansfield, Ohio.
Ideal Heating Corp., 807 E. Gage Av., Los Angeles 1, Calif.
Ideal Industries, Inc., 1084 Park Av., Sycamore, Ill.
Ideal Products Co., 530 23rd St., Oshkosh, Wis.
Iden Associates, 1805 N. Milwaukee Av., Chicago 47, Ill.
Ilg Electric Ventilating Co., 2850 N. Crawford Av., Chicago 41, Ill.
Illinois Bronze Powder Co., Inc., 2023 S. Clark St., Chicago 16, Ill.
Illinois Iron & Bolt Co., Freeman Stoker Div., 914 S. Michigan Av., Chicago 5, Ill.
Illinois Testing Laboratories, Inc., 420 N. LaSalle St., Chicago 10, Ill.
Illinois Zinc Co., 2959 W. 47th St., Chicago 32, Ill.
Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago 7, Ill.
Imperial Electric Co., 64 Ira Av., Akron 9, Ohio.
Incinerator Products Co., 667 S. Post, Detroit, Mich.
Independence Stove & Mfg. Co., Cor. Hayward & Cottage, Independence, Mo.
Independent Nail & Packing Co., P. O. Box N. Bridgewater, Mass.
Independent Pneumatic Tool Co., Aurora, Ill.
Independent Register Co., 3747 E. 93rd St., Cleveland 5, Ohio.
Industrial Brownhoist Corp., 135 Washington, Bay City, Mich.
Industrial Engineering Corp., 206 N. Ninth St., Terre Haute, Ind.
Industrial Mfg. & Engineering Co., 3845 N. Ravenswood Av., Chicago 13, Ill.
Industrial Metal Protectives, 401 Homestead Av., Dayton, Ohio.
Industrial Screw Co., 711 W. Lake St., Chicago 6, Ill.
Industrial Service Laboratories, 710 W. National Ave., Milwaukee 4, Wis.
Infra Insulation Inc., 525 Broadway, New York, N. Y.
Ingersoll Products Div., Borg-Warner Corp., 760 E. Vine St., Kalamazoo, Mich.
Ingersoll-Rand Co., 11 Broadway, New York 4, N. Y.
Ingersoll Steel Div., Borg-Warner Corp., 310 S. Michigan Ave., Chicago 4, Ill.
Ingram Machinery Co., P. O. Box 305, Picher, Okla.
Inland Steel Co., 38 S. Dearborn St., Chicago 3, Ill.
Inland Steel Container Co., 6532 S. Menard St., Chicago 38, Ill.
Inland Steel Products Co., 4023 W. Burnham St., Milwaukee 1, Wis.
Insto-Gas Corp., 1977 E. Woodbridge St., Detroit 7, Mich.
Insulating Equipment, Inc., 39 S. LaSalle St., Chicago 3, Ill.
Insulation & Refractories Co., Williamson, N. Y.
Insulite Div., Minnesota and Ontario Paper Co., 500 Baker Arcade Bldg., Minneapolis 2, Minn.
Inter-Coastal Paint Co., 15th & Southern R. R. East St. Louis, Ill.
International Engineering, Inc., 1145 Bolander, Dayton 1, Ohio.
International Heater Co., 101 Park Av., Utica 2, N. Y.
International Mfg. Co., 600 E. Grand, Oklahoma City, Okla.
International Metal Products Co., P. O. Box 1712, Phoenix, Ariz.
International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
International Oil Burner Co., Park & Spring, St. Louis 10, Mo.
International Register Co., 2620 W. Washington Blvd., Chicago 12, Ill.
International Sales Co., 2045 Evans Av., San Francisco 24, Calif.
International Steel Co., 1556 Edgar St., Evansville, Ind.
International Vermiculite Co., Girard, Ill.
Interstate Drop Forge Co., 4051 N. 27th St., Milwaukee, Wis.
Interstate Machinery Co., Inc., 1433 W. Pershing Road, Chicago 9, Ill.
Interstate Sales Co., 123 E. 18th St., New York 3, N. Y.
Iona Ventilator Co., Inc., 2821-29 W. Dauphin St., Philadelphia 32, Pa.
Iowa Paint Mfg. Co., 118-20 Eighth St., Des Moines 9, Iowa.
Iron City Chemical Co., Glycolator Div., Valencia, Pa.
Iron Lung Ventilator Co., 4019 Prospect Ave., Cleveland 3, Ohio.
Iron Fireman Mfg. Co., 3121 W. 106th St., Cleveland 11, Ohio.
Iron-Hide Sales Co., Dock St., Matawan, N. J.
Irvington Varnish and Insulator Co., 6 Argyle Terrace, Irvington 11, N. J.

J

J & J Sheet Metal Co., 23836 Hoover Rd., Van Dyke, Mich.
Jabsco Pump Co., 2031 N. Lincoln, Burbank, Calif.
Jack & Heintz, Inc., 17600 Broadway, Cleveland 1, Ohio.
Jackes-Evans Mfg. Co., 4400 N. Union Blvd., St. Louis 15, Mo.
Jackson & Church Co., 321 N. Hamilton St., Saginaw 65, Mich.
Jackson Gas Burner Corp., 8781 Quincy Av., Detroit 4, Mich.
Jaden Mfg. Co., 1601 W. 2nd St., Hastings, Nebr.
James Regulator Co., Inc., 2nd & Pine Sts., Hamburg, Pa.
Jamestown Metal Corp., 104 Blackstone Av., Jamestown 6, N. Y.
Jan-Air Inc., Richmond, Ill.
Jefferson Electric Co., 25th & Madison St., Bellwood, Ill.
Jefferson Machine Tool Co., Fourth, Cutter & Sweeney Sts., Cincinnati 3, Ohio.
Jenn Air Products Co., 409 Architects Bldg., Indianapolis 4, Ind.
Jessop Steel Co., Washington, Pa.
Jessup Signal Gauge Co., 1390 W. Minnehaha Pkwy., Minneapolis 9, Minn.
Jet-Heet, Inc., 152 S. Van Brunt St., Englewood, N. J.
Jettronaire, Inc., 2417 Walnut St., McKeesport, Pa.
Johns-Manville, 22 E. 40th St., New York 16, N. Y.
Johnson Co., S. T., 940 Arlington Ave., Oakland 8, Calif.
Johnson Corp., The, 806 Wood St., Three Rivers, Mich.

Johnson Gas Appliance Co., 520 "E" Av., N. W., Cedar Rapids, Iowa.
Johnson Heater Corp., 1 Winnisimet St., Chelsea, Mass.
Johnson, Inc., William, Brenner & Kent Sts., Newark 3, N. J.
Johnson Ladder Shoe Co., Eau Claire, Wis.
Johnson Machine & Press Corp., 620 W. Indiana Av., Elkhart, Ind.
Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
Johnson Service Co., 507 E. Michigan St., Milwaukee, Wis.
Johnston & Chapman Co., 2925 Carroll Ave., Chicago 12, Ill.
Johnston Foil Mfg. Co., 6100 S. Broadway, St., Louis 11, Mo.
Johnston Gas Furnace Corp., Ltd., 11847 Vose St., North Hollywood, Calif.
Jones & Laughlin Steel Corp., Third Av., & Ross St., Pittsburgh 30, Pa.
Jones Foundry & Machine Co., W. A., 4401 W. Roosevelt Rd., Chicago 24, Ill.
Jordan & Co., Inc., Paul R., 311 E. South St., Indianapolis 4, Ind.
Joy Mfg. Co., Oliver Bldg., Pittsburgh 22, Pa.
Junior Co., J. C., 444 E. 63rd St., Kansas City, Mo.
Juniper Elbow Co., Inc., 72-15 Metropolitan Av., Middle Village, L. I., N. Y.
Justrite Mfg. Co., 2061 N. Southport Ave., Chicago, Ill.

K

Kaiser Aluminum & Chemical Corp., 1924 Broadway, Oakland 12, Calif.
Kane & Roach, Inc., Niagara & Shonnard Sts., Syracuse 4, N. Y.
Katelman Foundry & Mfg. Co., Third Av. & Eleventh St., Council Bluffs, Iowa.
Kathe Controls, 9711 Euclid Ave., Cleveland 6, Ohio.
Kauffman Air Conditioning Corp., 4505 Olive St., St. Louis 8, Mo.
Kaufman Co., H. J., 13215 Roselawn Ave., Detroit 4, Mich.
Kaustine Co., Inc., 1492 Washington Ave., Perry, N. Y.
Kawneer Co., Niles, Mich.
Keasbey & Mattison Co., Butler Av., Ambler, Pa.
Keasbey Co., Robert A., 139 W. 19th St., New York 11, N. Y.
Keckley Co., O. C., 400 W. Madison St., Chicago 6, Ill.
Keith Furnace Co., Dean Av., at E. 26th, Des Moines 17, Iowa.
Keller Tool Co., P. O. Box 268, Grand Haven, Mich.
Kelvinator Div., Nash-Kelvinator Corp., 14250 Plymouth Rd., Detroit 32, Mich.
Kemode Mfg. Co., 2 W. 46th St., New York 11, N. Y.
Ken-Joy Gas Burner Co., 3231 W. National Av., Milwaukee 15, Wis.
Kennametal Inc., Latrobe, Pa.
Kennard Corp., 1819 S. Hanley Rd., St. Louis 17, Mo.
Kensico Tube Co., Mt. Kisco, N. Y.
Kent Co., Inc., 435 Canal St., Rome, N. Y.
Kerentoff, G. L., 2218 Reading Road, Cincinnati 2, Ohio.
Kerotest Mfg. Co., 2525 Liberty Av., Pittsburgh 22, Pa.
Kester Solder Co., 4201 Wrightwood Av., Chicago 39, Ill.
Keystone Asphalt Products Co., 101 E. Ontario St., Chicago 11, Ill.
Keystone Flashing Co., 2310 N. 28th St., Philadelphia 32, Pa.
Kidder Mfg. Co., Inc., J. F., 426 Colchester Av., Burlington, Vt.
Kilbury Mfg. Co., Inc., 14529 Hawthorne Blvd., Lawndale, Calif.
Kilgore Mfg. Co., Westerville, Ohio.
Killam Gas Burner Co., 260 Broadway, Denver 9, Colo.
Kimberly-Clark Corp., Neenah, Wis.
Kindl-Aire Corp., 1480 W. 112th St., Cleveland 2, Ohio.
Kindt-Collins Co., 12653 Elmwood Ave., Cleveland 11, Ohio.
King Metal Co., 414 N. W. Fourth St., Oklahoma City 3, Okla.
King Co., Box 178, Owatonna, Minn.
Kingston-Conley Div., Hoover Co., 70 Brook Ave., North Plainfield, N. J.
Kingston Products Corp., Tipton Div., Tipton, Ind.
Kirk & Blum Mfg. Co., 2883 Spring Grove Av., Cincinnati 25, Ohio.
Kirk & Son, Inc., Morris P., 2717 S. Indiana St., Los Angeles 23, Calif.
Klauer Mfg. Co., 9th & Washington St., Dubuque, Iowa.
Kleenair Furnace Co., 5329 N. E. Sandy Blvd., Portland 13, Ore.
Kleen-Heet, Inc., 1829 Carroll Av., Chicago 12, Ill.
Kleer-Kleen Mfg. Co., 901-72nd Ave., Oakland 21, Calif.
Klem Chemicals, Inc., 14401 Lanson Av., Dearborn, Mich.
Klenk's Aviation Snips, 107 E. 5th St., Wilmington, Del.
Kling Bros. Engineering Works, 1320 N. Kostner Ave., Chicago 51, Ill.
Klipfel Mfg. Co., 1075 Lincoln Ave., Hamilton, Ohio.
Kloppenborg Aluminum Foundry, 211 Marquette St., Davenport, Iowa.
Knights Co., James, Sandwich, Ill.
Knowles Mushroom Ventilator Co., 583 Upper Mountain Ave., Upper Montclair, N. J.
Kol-Master Corp., Oregon, Ill.
Kolb Refractories Co., Meadow & Jackson Sts., Philadelphia, Pa.
Kool Air Engineering Co., 1388 Fairfax Dr., San Bernardino, Calif.
Koolvent Metal Awning Corp., of America, 324 Fourth Av., Pittsburgh 22, Pa.
Koppers Co., Inc., Tar Products Div., Koppers Bldg., Pittsburgh 19, Pa.
Korfund Co., 48-01-A 32nd Pl., Long Island City 1, N. Y.
Kortz Blower Mfg. Co., 117 Michigan St., N. W., Grand Rapids, Mich.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Kraissl Co., Inc., Terhune & Willams Avs., Hackensack, N. J.
Kramer Bros. Foundry Co., 17 Dell St., Dayton 4, Ohio.
Kramer Trenton Co., N. Olden & Breunig Ave., Trenton 5, N. J.
Kraus Mfg. Co., Chas. E., 122 S. 8th St., Louisville 2, Ky.
Krauser-Boyd, Inc., 553 River Road, North Tonawanda, N. Y.
Kresky Mfg. Co., Inc., Second & H Sts., Petaluma, Calif.
Kresno-Stamm Co., 345 Commercial Ave., Palisades Park, N. J.
Krueger Air Conditioning Co., 19 E. Rillito St., Tucson, Ariz.
Krueger Sentry Gauge Co., Green Bay, Wis.
Kwikheat Mfg. Co., 3732 San Fernando Rd., Glendale 4, Calif.

L

Laclede-Christy Co., 310 S. Michigan Av., Chicago 4, Ill.
Laclede Steel Co., Arcade Bldg., St. Louis 1, Mo.
Laco Oil Burner Co., Inc., 238 Union St., Griswold, Iowa.
LaCrosse Steel Roofing & Corrugating Co., 227 Jay St., LaCrosse, Wis.
LaHarco Industries, Lyndale and 2nd Av., N., Minneapolis, Minn.
Lake Chemical Co., 3052 W. Carroll Ave., Chicago 12, Ill.
Lakewood Engineering & Mfg. Co., 1756 W. Lake St., Chicago 12, Ill.
Lamb Electric Co., 627 Lake St., Kent, Ohio.
Lamb & Ritchie Co., 250 Albany St., Cambridge 39, Mass.
Lamnert & Mann Co., Wood & Walnut Sts., Chicago 12, Ill.
Lander & Abbott, La Crescenta, Calif.
Landis & Gyr, Inc., 45 W. 45th St., New York 36, N. Y.
Lane Shur-Grip Tool Co., 1420 S. Michigan Ave., Chicago 5, Ill.
Langsenkamp Co., F. H., 229 E. South St., Indianapolis 25, Ind.
Lapeer Mfg. Co., 1144 W. Baltimore, Detroit 2, Mich.
Larkin Coils, Inc., 519 Memorial Dr., S. E., Atlanta 1, Ga.
Lasko Metal Products, Inc., 438 W. Gay St., West Chester, Pa.
Lastik Products Co., Inc., 203 Iroquois Bldg., Pittsburgh 13, Pa.
Lau Blower Co., 2005 Home Av., Dayton 7, Ohio.
Lawson Mfg. Co., 300 N. Lexington Av., Pittsburgh 8, Pa.
Leas Co., H. Leslie, Monona, Iowa.
Ledcote Products Co., 35-01 Vernon Blvd., Long Island City 1, N. Y.
Lee Co., K. O., Congress at 1st, Aberdeen, S. Dak.
Lee Corporation, 1011 Tatnall St., Wilmington, Del.
Lee & Son Co., Thomas, 128-132 W. Second St., Cincinnati 2, Ohio.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
Leeson Air Conditioning Corp., 14631 Meyers Rd., Detroit 27, Mich.
Lehigh Fan & Blower Co., 730 N. 17th St., Allentown, Pa.
Lehigh Mfg. Co., P. O. Box 1418, Lancaster, Pa.
Lehon Co., 4425 S. Oakley Av., Chicago 9, Ill.
Leisur-Maid Mfg. Corp., 338 Wealthy St., S. W., Grand Rapids 3, Mich.
Leisurehouse, Inc., 110 N. Lorraine, Wichita, Kans.
Lenk Mfg. Co., 30-38 Cummington St., Boston 15, Mass.
Leland Electric Co., Div. American Machine & Foundry Co., 1501 Webster St., Dayton 1, Ohio.
Lennox Furnace Co., 200 S. 12th Av., Marshalltown, Iowa; 1705 Olentagy River Rd., Columbus, Ohio; 400 N. Midler Av., Syracuse, N. Y.
Leslie Mfg. Co., P. O. Box 7042, Dallas, Texas.
Leslie Welding Co., 2943 Carroll Ave., Chicago 12, Ill.
Levow, David, 308 W. 20th St., New York 11, N. Y.
Lewellen Mfg. Co., Columbus, Ind.
Lewin-Mathes Co., Lewin Metals Div., 12th & Chateau Sts., St. Louis 2, Mo.
Lexington Supply Co., 4815 Lexington Ave., Cleveland 3, Ohio.
L'Hommedieu & Sons Co., Chas. F., 4521 Ogden Av., Chicago 23, Ill.
Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo 3, Ohio.
Libert Machine Co., 324 N. Roosevelt St., Green Bay, Wis.
Liberty Combustion Corp., 240 Court St. Rd., P. O. Box 300, Syracuse 1, N. Y.
Lientz Co., B. P., P. O. Box 2275, Kansas City, Mo.
Lifetime Mfg. Co., Pemberville, Ohio.
Lignum-Vitae Products Corp., 906 Boyd Av., Jersey City, N. J.

Lilie-Hoffmann Cooling Towers, Inc., 4239 Duncan Ave., St. Louis 10, Mo.
Lima Register Co., 651 N. Baxter St., Lima, Ohio.
Lincoln Electric Co., 22801 St. Clair Av., Cleveland 17, Ohio.
Lincoln Machine Co., Livermore Falls, Maine.
Linde Air Products Co., Div. Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Lindsay Structure, Inc., 5000 W. Dempster St., Skokie, Ill.
Link-Belt Co., 2410 W. 18th St., Chicago 8, Ill.
Lipman Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Liquid Carbonic Corp., Industrial Gas Div., 3100 S. Kedzie Av. Chicago 23, Ill.
Liquidepth Indicators, Inc., 43-22 Tenth St., Long Island City 1, N. Y.
Liquidometer Corp., Skillman Av., 36th and 37th Sts., Long Island City 1, N. Y.
Lisbon Hoist and Crane Co., Div. Wright File Co., Lisbon, Ohio.
Litman, Morris, 39 Cliftwood St., Springfield, Mass.
Little Burner Co., Inc., H. C. Woodland Ave. & Du Bois St., San Rafael, Calif.
Littleford Bros., Inc., 453 E. Pearl St., Cincinnati 2, Ohio.
Little Giant Vaporizer Co., 5101 Classen Blvd., Oklahoma City 6, Okla.
Little Janitor Furnace Clock Co., 621 Broadway, New York, N. Y.
Livingston, Inc., Kalamazoo Av., Marshall, Mich.
Locke Regulator Co., Walter and Osborne Sts., Salem, Mass.
Lockformer Co., 4615 Roosevelt Rd., Chicago 50, Ill.
London Chemical Co., 325 W. 32nd St., Chicago, Ill.
Lonergan Mfg. Co., 704 Clark St., Albion, Mich.
Lord Mfg. Co., 1635 W. 12th St., Erie, Pa.
Los Angeles Gas Appliance Co., Inc., 3816 Medford St., Los Angeles 33, Calif.
Los Angeles Sheet Metal Mfg. Co., Inc., 901 E. Ninth St., Los Angeles 21, Calif.
Louden Machinery Co., Fairfield, Iowa.
Louvra Corp., 1010 Jeanette Ave., Union, N. J.
Lovejoy Flexible Coupling Co., 5016 Lake St., Chicago 44, Ill.
Lovekin Water Heater Co., 21-43 Laurel St., Philadelphia 23, Pa.
Lucas & Co., Inc., John, 1617 Pennsylvania Blvd., Philadelphia, Pa.
Lufkin Rule Co., Saginaw, Mich.
Lukens Metal Co., Thos. F., Hedley & Bath Sts., Philadelphia 37, Pa.
Lug-All Co., The, 331 E. Lancaster Ave., Wynnewood, Pa.
Lukens Steel Co., 308 S. First Ave., Coatesville, Pa.
Lumm Co., A. H., 2512 Albion St., Toledo 6, Ohio.
Lundt, Inc., Ernest C., Route 6, P. O. Box 216, Little Falls, N. J.
Lustrik, Inc., 3324 Frankford Av., Philadelphia 4, Pa.
Luty Furnace Mfg. Co., 8747 Lyndon Ave., Detroit 21, Mich.
Lyman Co., H. B., Southampton, Hampshire Co., Mass.
Lynch Corp., 3600 Summit St., Toledo 1, Ohio.
Lynn Products Co., 17 Willow St., Lynn, Mass.
Lyon, Conklin & Co., Inc., Race & McComas St., Baltimore 30, Md.
Lyon Metal Products, Inc., 740 Madison Av., Aurora, Ill.

M

MB Mfg. Co., Inc., 1060 State St., New Haven 11, Conn.
M & E Mfg. Co., 2571 W. Winthrop, Indianapolis 5, Ind.
McCabe Powers Auto Body Co., 5900 N. Broadway, St. Louis, Mo.
McCollum Hoist & Mfg. Co., 721 Rogers St., Downers Grove, Ill.
McCord Corp., 2587 E. Grand Blvd., Detroit 11, Mich.
McCorkle Co., D. H., Sixth & Bancroft Way, Berkeley 2, Calif.
McCoy Products Co., 420 Felt Blvd., Salt Lake City 1, Utah.
McDaniel Mfg. Co., Inc., 1012 Powhattan St., Dallas 2, Texas.
McDonnell & Miller, Inc., 3500 N. Spaulding Av., Chicago 18, Ill.
McGraw Electric Co., Clark Div., 5201 W. 65th St., Chicago 38, Ill.
McIntire Connector Co., 263 Jefferson St., Newark 5, N. J.
McKay Co., 1005 Liberty Ave., Pittsburgh 22, Pa.
McKee Furnace Co., 3861 Freemont Av., N., Minneapolis 12, Minn.
McLarty Systems, 2600 Dickman, Battle Creek, Mich.
McLeod & Henry Co., Inc., 357 First St., Troy, N. Y.
McPherson Furnace & Supply Co., Box 7706, Portland 12, Ore.
McQuay, Inc., 1600 Broadway, N. E., Minneapolis 13, Minn.
McQuay-Norris Mfg. Co., Southwest Ave. at Marconi, St. Louis, 10, Mo.
McRae Valve Co., 620 S. Main St., Los Angeles, Calif.
Machine Rebuilding Co., 2738 Chene St., Detroit 7, Mich.
Machinery Liquidating Co., 2663 Michigan Ave., Detroit 16, Mich.
Madden Brass Products Co., 1111 N. Franklin St., Chicago 10, Ill.
Made-Rite Co., Inc., 10th & Monroe St., Newport, Ky.
Magic Chef, Inc., 1641 S. Kingshighway Blvd., St. Louis 10, Mo.
Magic Servant Products Co., 15211 Joy Rd., Detroit 28, Mich.
MaGirl Foundry & Furnace Co., 413 E. Oakland Ave., Bloomington, Ill.
Magnetool Div., Multifinish Mfg. Co., 2114 Monroe, Detroit 7, Mich.
Magnus Chemical Co., Garwood, N. J.
Mahl Mfg. Co., 3081 Slauson Ave., Huntington Park, Calif.
Maid-O'-Mist Inc., 3217 N. Pulaski Rd., Chicago 41, Ill.
Majestic Co., Inc., 733 Erie St., Huntington, Ind.
Mall Tool Co., 7740 South Chicago Av., Chicago 19, Ill.
Malleable Iron Fittings Co., Lock Box 231, Branford, Conn.
Manhattan Perforated Metal Co., Inc., 43-17 37th St., Long Island City 1, N. Y.
Manheim Mfg. and Belting Co., Manheim, Pa.
Manning, Maxwell & Moore, Inc., 250 E. Main St., Stratford, Conn.
Maple City Furnace Co., 605 S. Main St., Monmouth, Ill.
Maplewood Machinery Co., 2634 Fullerton Ave., Chicago 47, Ill.
Marathon Electric Mfg. Corp., Cherry & Randolph Sts., Wausau, Wis.
Marble-Card Electric Co., Gladstone, Mich.
Marco Industries, Inc., 786 Terrace Blvd., DePew, N. Y.
Marietta Metal Products Corp., 540 N. 63rd St., Philadelphia, Pa.
Marine Electrolysis Eliminator Co., 617 Dearborn St., Seattle, Wash.
Marion Metal Products, Marion, Ohio.
Markal Co., 3052 W. Carroll Ave., Chicago 12, Ill.
Market Forge Co., Everett 49, Mass.
Marley Co., Inc., 222 W. Gregory Blvd., Kansas City 5, Mo.
Marlo Coil Co., 6135 Manchester Av., St. Louis 10, Mo.
Marquart Mfg. Co., 1241 High St., Oakland 1, Calif.
Marquette Mfg. Co., Inc., 307 E. Hennepin Ave., Minneapolis 14, Minn.
Marsh Corp., Jas. P., Skokie, Ill.
Marsh Lumber Co., Inc., 535-611 Tuscarawas Ave., Dover, Ohio.
Marshall Furnace Co., Dobbins & Hanovers Sts., Marshall, Mich.
Marshalltown Mfg. Co., 901 E. Nevada St., Marshalltown, Iowa.
Martens & Stormoen Co., 15 Hathaway St., Boston 10, Mass.
Martin Fan & Blower Co., 4634 W. 21st Place, Chicago 50, Ill.
Martin Co., Inc., J. O., 637 Minna St., San Francisco 3, Calif.
Martin Stamping & Stove Co., Huntsville, Ala.
Martocello & Co., Jos. A., 229 N. 13th St., Philadelphia 7, Pa.
Marvin Mfg. Co., 3071 E. 12th St., Los Angeles 23, Calif.
Mason Machine Co., Inc., 817 E. King St., York, Pa.
Masonite Corp., 111 W. Washington St., Chicago 2, Ill.
Master Electric Co., 126 Davis Av., Dayton 1, Ohio.
Master Products Co., Inc., 7000 S. Wentworth Av., Chicago 21, Ill.
Matt Coil-Less Burner Co., 4015 W. Lake St., Chicago 24, Ill.
Matthiessen & Hegeler Zinc Co., LaSalle, Ill.
Mauer Engineering 2525 Colfax St., Evanston, Ill.
Maurey Mfg. Corp., 2915 S. Wabash Av., Chicago 16, Ill.
Maxant Button & Supply Co., 117 S. Morgan St., Chicago 7, Ill.
Maxwell, Inc., 2000 S. Cherokee St., Denver, Colo.
Mayflower Air Conditioners, Inc., Duluth Av. & E. Seventh St., St. Paul 6, Minn.
Mayne Products Co., 324 Harries Bldg., Dayton 2, Ohio.
Mayson Mfg. Co., 4332 Horatio St., Detroit 10, Mich.
Maysteel Products, Inc., 740 N. Plankinton Ave., Milwaukee 3, Wis.
Maze Co., W. H., Peru, Ill.
Meadows, Inc., W. R., 2 Kimball St., Elgin, Ill.
Mechanical Products Co., 1723 First Ave., S. Seattle 4, Wash.
Mehl Machinery, 1101 Austin St., Houston 1, Texas.
Meier Electric & Machine Co., Inc., 3525 E. Washington St., Indianapolis 7, Ind.
Melaway Corp., Box 248, Brandon, Wis.
Meldon Industries, Div. Tool Industries, Inc., 15438 Telegraph Rd., Detroit, Mich.
Mel-Gauge Co., P. O. Box 17, Station A, New Haven, Conn.
Mellish & Murray Co., 1715 Carroll Av., Chicago 12, Ill.
Merchandising and Mfg. Associates, Inc., 53 North Duke St., Lancaster, Pa.
Mercoid Corp., 4201 Belmont Av., Chicago 41, Ill.
Meriam Instrument Co., 10920 Madison Av., Cleveland 2, Ohio.
Met Sales & Mfg. Co., 1217 N. Main St., Rockford, Ill.

Metal Carrier Corp., 1750 Alpine Ave., N. W., Grand Rapids 4, Mich.
Metal Fabricators, Inc., P. O. Box 3232, Charlotte 3, N. C.
Metal & Thermit Corp., 100 E. 42nd St., New York 17, N. Y.
Metalloy Products Co., 1351 E. 17th St., Los Angeles, Calif.
Metalmen, Inc., 2100 W. Grand Ave., Chicago 12, Ill.
Metro Metal Mfg. Co., Holt, Mich.
Metromatic Mfg. Co., 21 Henderson St., Everett 49, Mass.
Metropolitan Refining Co., Inc., 50-23 23rd St., Long Island City 1, N. Y.
Mettler Co., Inc., The, 4366 Worth St., Los Angeles 16, Calif.
Metzner Stove Repair Co., 515 Wyandotte, Kansas City 6, Mo.
Meyer & Bro. Co., F., 308 S. Commercial St., Peoria, Ill.
Meyer Furnace Co., 1300 S. Washington St., Peoria 1, Ill.
Michigan Steel Tube Products Co., Holbrook & Buffalo Avs., Detroit 12, Mich.
Micro Products Co., 20 N. Wacker Dr., Chicago 6, Ill.
Mid-America Steel Warehouses, 1000 W. 50th St., Chicago 9, Ill.
Midco Register Corp., 1059 Grand Av., St. Paul 5, Minn.
Mid-Continent Metal Products Co., 1960 Clybourn Av., Chicago 14, Ill.
Midland Paint & Varnish Co., 3801 E. 91st St., Cleveland 5, Ohio.
Mid-States Welder Mfg. Co., 6025 S. Ashland Ave., Chicago 36, Ill.
Midwest Automatic Control Co., 510 Third St., Des Moines 9, Iowa.
Miller Co., The, Heating Products Div., Meriden, Conn.
Miller & Doing, 89 Adams St., Brooklyn 1, N. Y.
Miller Electric Mfg. Co., Inc., 718 S. Bounds St., Appleton, Wis.
Miller Floor Furnace Co., 741 E. 14th St., Oakland, Calif.
Miller-Harris Instrument Co., 601 E. Ogden Av., Milwaukee 2, Wis.
Miller Products Co., Box 156, Lansing 9, Mich.
Millers Falls Co., 57 Wells St., Greenfield, Mass.
Mills Corp., Elmer E., 2930 N. Ashland Ave., Chicago 13, Ill.
Mills Industries, Inc., 4110 W. Fullerton Av., Chicago 39, Ill.
Milton Equipment Co., 402 Race St., Philadelphia 6, Pa.
Milwaukee Brush Mfg. Co., 2236 N. 30th St., Milwaukee, Wis.
Milwaukee Electric Tool Corp., 5316 W. State St., Milwaukee 8, Wis.
Milwaukee Gas Specialty Co., P. O. Box 461, Milwaukee 1, Wis.
Mine Safety Appliance Co., Braddock, Thomas and Meade Sts., Pittsburgh, Pa.
Minneapolis-Honeywell Regulator Co., 2726 Fourth Av. S., Minneapolis 8, Minn.
Minnesota Mining & Mfg. Co., 900 Fauquier Av., St. Paul 6, Minn.
Minn-Kota Foundry & Mfg. Co., P. O. Box 822, Fargo, N. Dak.
Misener Mfg. Co., Inc., 202-8 Walton St., Syracuse 2, N. Y.
Mitchell & Co., Inc., W. K., 29th & Ellsworth, Philadelphia 46, Pa.
Mitchell Mfg. Co., 2525 N. Clybourn Ave., Chicago, Ill.
Modern Controls Corp., 24400 Mound Rd., Centerline, Mich.
Modern Die & Machine Co., 166 Pleasant St., Boston 25, Mass.
Modern Engineering Co., 3411 Pine Blvd., St. Louis 3, Mo.
Modern Materials Co., 46330 W. 7 Mile Rd., Northville, Mich.
Modine Mfg. Co., 1500 DeKoven Ave., Racine, Wis.
Moeller Instrument Co., 132nd St. & 89th Av., Richmond Hill 18, N. Y.
Moeschl-Edwards Corrugating Co., Inc., P. O. Box 1115, Cincinnati, Ohio.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Molloy Machine Corp., 3445 N. Western Ave., Chicago, Ill.
Monad Products Co., 6550 Hartwell, Dearborn, Mich.
Monarch Alloys, 503 N. Chestnut St., Ravenna, Ohio.
Monarch Mfg. Works, Inc., 2501 E. Ontario St., Philadelphia 34, Pa.
Moncrief Furnace Co., P. O. Box 1673, Atlanta 1, Ga.
Moncrief Furnace & Mfg. Co., Inc., 3903 Main St., Dallas 1, Texas.
Monitor Controller Co., 51-55 Hayward St., Boston 84, Mass.
Monogram Products Co., Inc., 731 N. 35th St., Philadelphia 4, Pa.
Montag Stove & Furnace Works, 2011 N. Columbia Blvd., Portland 17, Ore.
Moore Co., 806 S. Missouri Ave., Marceline, Mo.
Moore Div., Conlon-Moore Corp., 105 E. Benton St., Joliet, Ill.
Moore Equipment Co., 3827 S. 52nd St., Lincoln 6, Nebr.
Morey, Dan, 814-816 S. Robertson Blvd., Los Angeles 35, Calif.
Morrison Products, Inc., 16816 Waterloo Rd., Cleveland 10, Ohio.
Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N. Y.
Morse-Smith-Morse, Inc., 165 Dexter Ave., Watertown 72, Mass
Mortell Co., J. W., Hobbie Av. & Big Four R.R., Kankakee, Ill.
Moser & Son Mfg. Co., 227 E. Washington St., Bluffton, Ind.
Mountain States Equipment Co., 1238 Speer Blvd., Denver 4, Colo.
Mt. Hawley Mfg. Co., Mt. Hawley Airport, Peoria 4, Ill.
Mt. Vernon Furnace & Mfg. Co., P. O. Box 213, Mt. Vernon, Ill.
Muckle Mfg. Co., Owatonna, Minn.
Mueller Brass Co., 1925 Lapeer Av., Port Huron, Mich.
Mueller Co., 512 W. Cerro Gordo St., Decatur, Ill.
Mueller Furnace Co., L. J., 2005 W. Oklahoma Av., Milwaukee 15, Wis.
Mulkey Co., J. P., W. 8 Mile & Telegraph Rds., Detroit 19, Mich.
Multi-Therm Mfg. Co., Inc., 11637 Linwood, Detroit 6, Mich.
Muncie Burner Mfg. Co., 27293 Eureka Rd., Romulus, Mich.
Muncie Gear Works, Inc., 700 N. Wysor, Muncie, Ind.
Mundet Cork Corp., 7101 Tonnelle Ave., North Bergen, N. J.
Mundt & Sons, Charles, 53 Fairmont Av., Jersey City 4, N. J.
Munton Mfg. Co., 9400 Belmont Av., Franklin Park, Ill.
Murray Co. of Texas, Inc., 3200 Canton St., Dallas 1, Texas.
Murray Mfg. Co., D. J., 1002-24 Third St., Wausau, Wis.
Mustee Heater Co., 3409 Superior Av., Cleveland 14, Ohio.
Mutual Liquid Gas & Equipment Co., 3600 W. Imperial Highway, Inglewood, Calif.
Myers & Bro. Co., F. E., Ashland, Ohio.
Myers Electric Co., Inc., 209 First Av., Pittsburgh 22, Pa.

N

Nat Corp., 2710 McGee Trafficway, Kansas City 8, Mo.
National Air Conditioning Inc., 221 Central Ave., Johnstown, Pa.
National Airoil Burner Co., Inc., 1284 E. Sedgley Av., Philadelphia 34, Pa.
National Appliance Co., 4814 W. Vernor Hwy., Detroit 9, Mich.
National Appliances, Inc., Thomas Blvd. & N. Lexington Ave., Pittsburgh 8, Pa.
National Carbon Co., Inc., 30 E. 42nd St., New York 17, N. Y.
National Cork Co., 1 Engle St., Englewood, N. J.
National Cylinder Gas Co., 840 N. Michigan Av., Chicago 11, Ill.
National Electric Welding Machines Co., 1846 N. Trumbull St., Bay City, Mich.
National Engineering & Mfg. Co., 519 Wyandotte, Kansas City 6, Mo.
National Engineering Products, Inc., Commerce & Savings Bldg., Washington, D. C.
National Foundry & Furnace Co., Station "B," Dayton 7, Ohio.
National Fuel Conservation Co., Inc., 257 Battle Av., White Plains, N. Y.
National Gas Equipment Co., Inc., P. O. Box 443, Terrell, Texas.
National Gypsum Co., 325 Delaware Av., Buffalo 2, N. Y.
National Heater Co., 2182 Cleora Av., St. Paul 4, Minn.
National Lead Co., 111 Broadway, New York 6, N. Y.
National Lock Co., 1902 Seventh St., Rockford, Ill.
National Machine Tool Co., 1536 Clark St., Racine, Wis.
National Mfg. Corp., 151 Fillmore Av., Tonawanda, N. Y.
National Metal Fabricators, 2136 S. Sawyer Av., Chicago 23, Ill.
National Oil Burner Co., 614 Bergen St., Brooklyn 17, N. Y.
National Pipe Bending Co., 122 River St., New Haven 13, Conn.
National Screw & Mfg. Co., Chester Hoist Div., Lisbon, Ohio.
National Sheet Metal Co., 1617 Water St., Peru, Ill.
National Steam Pump Co., 701 W. Johnson St., Upper Sandusky, Ohio.
National Stoker Co., Inc., 2820 Locust St., St. Louis 3, Mo.
National Super Service Co., Inc., 1944 N. 13th St., Toledo 2, Ohio.
National Tube Co., Sub. U. S. Steel Corp., Frick Bldg., Pittsburgh 30, Pa.
Nebel Mfg. Co., P. O. Box 3942, Shaker Sq. Station, Cleveland 20, Ohio.
Neilson Chemical Co., 6564 Benson St., Detroit 7, Mich.
Nelpin Mfg. Co., 45-17 Davis St., Long Island City 1, N. Y.
Nelson Bros. & Strom Co., 1620 Racine St., Racine, Wis.
Nelson Products, Herman, American Air Filter Co., Inc., 215 Central Ave., Louisville 8, Ky.
Nelson Specialty Welding Equipment Corp., Dept. 5, 440 Peralta Av., San Leandro, Calif.
Nelson Stud Welding Div., Gregory Industries, Inc., Toledo Av. & E. 28th St., Lorain, Ohio.
Nesbitt, Inc., John J., State Rd. & Rhawn St., Philadelphia 36, Pa.
Nevinger Mfg. Co., Inc., Greenville, Ill.
New Albany Machine Mfg. Co., E. 10th & Water Sts., New Albany, Ind.
Newark Boiler Regulator Co., Inc., 15 Ward St., Bloomfield, N. J.
Newark Ladder & Bracket Co., Inc., Walnut & Central Ave., Clark (Rahway), N. J.
Newcomb-Detroit Co., 5741 Russell St., Detroit 11, Mich.
New Delphos Mfg. Co., 102 S. Pierce St., Delphos, Ohio.
New England Carbide Tool Co., 60 Brookline St., Cambridge 39, Mass.
New England Cooling Tower Co., 88 Broad St., Boston 10, Mass.

Newell & Sons, Irwin, Pa.
New Jersey Zinc Co., 160 Front St., New York 38, N. Y.
New Monarch Machine & Stamping Co., 406 S. W. 9th St., Des Moines 9, Iowa.
New Plastic Corp., 1041 N. Orange Dr., Hollywood 38, Calif.
Newport Steel Corp., Newport, Ky.
New York Belting & Packing Co., 1 Market St., Passaic, N. J.
New York Blower Co., 3155 Shields Av., Chicago 16, Ill.
Niagara Blower Co., 405 Lexington Ave., New York 17, N. Y.
Niagara Machine & Tool Works, 637-697 Northland Av., Buffalo 11, N. Y.
Niagara Motors Corp., Dunkirk, N. Y.
Nichols Wire & Aluminum Co., Davenport, Iowa.
Nicholson & Co., W. H., 178 Oregon St., Wilkes Barre, Pa.
Niles Rolling Mill Co., Niles, Ohio.
Noble & Stanton, Inc., 1035 Broadway, Bedford, Ohio.
Nooter Corp., 1400 S. Second St., St. Louis 4, Mo.
Norge Heat Div., Borg-Warner Corp., 346 E. South St., Kalamazoo, Mich.
Norma-Hoffmann Bearings Corp., Stamford, Conn.
Norman Products Co., Inc., 1150 Chesapeake Av., Columbus 12, Ohio.
Norristown Magnesia & Asbestos Co., Washington St. below Ford St., Norristown, Pa.
North American Mogul Products Co., Standard Building, Cleveland 13, Ohio.
Northern Blower Co., 6409 Barberton Av., Cleveland 2, Ohio.
Northern Indiana Brass Co., 935 Plum St., Elkhart, Ind.
Northern Steel & Stoker Corp., 3100 Prospect Rd., Peoria 4, Ill.
Northwest Foundry & Furnace Co., 2345 S. E. Gladstone St., Portland 2, Ore.
Northwest Heating, Inc., 1944 N. Lombard, Portland 3, Ore.
Northwest Lead Co., 2700 16th Av., S. W., Seattle 4, Wash.
Northwest Metal Products, Inc., 55 Spokane St., Seattle 4, Wash.
Northwestern Stove Repair Co., 662 W. Roosevelt Rd., Chicago 7, Ill.
Nortmann-Duffke Co., 2740 S. 32nd St., Milwaukee 46, Wis.
Norwalk Air Conditioning Corp., 138 Water St., South Norwalk, Conn.
Nugent Furnaces, Thos., 223 E. 80th St., New York 21, N. Y.
NuSteel Co., 1714 S. Ashland Av., Chicago 8, Ill.
NuTone, Inc., Madison & Red Bank Rd., Cincinnati, Ohio.
Nu-Way Corp., The, 2416 Fourth St., Rock Island, Ill.

O

Oakite Products Inc., 19 Rector St., New York 6, N. Y.
Oakland Foundry Co., Florida and A Sts., Belleville, Ill.
Obdyke, Inc., Benjamin P., 447 N. Eighth St., Philadelphia 23, Pa.
O'Brien Corp., 101 N. Johnson St., South Bend 21, Ind.
Octagon Ventilator Co., 5828-30 S. Oakley Av., Chicago 36, Ill.
Ohio Bolt & Nut Co., 33 - 1st Ave., Berea, Ohio.
Ohio Electric Mfg. Co., 5910 Maurice Ave., Cleveland 4, Ohio.
Ohio Foundry & Mfg. Co., Penn R. R. & Slack St., Steubenville, Ohio.
Ohio Paper Co., Miamisburg, Ohio.
Ohio Stove Co., Dept. 351, Portsmouth, Ohio.
Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., 300 Fourth Ave., Evansville 2, Ind.
Ohio Wire Products Co., 217 N. Tuscarawas Av., Dover, Ohio.
Ohmer Co., Geo. H., Box 34, Sta. D, Dayton 10, Ohio.
Ohmlac Paint & Refining Co., 6550 S. Central Av., Chicago 38, Ill.
Oil Equipment Laboratories, Inc., 456 Bridge St., Elizabeth, N. J.
Oil Equipment Mfg. Corp., 75 Brewster St., New Haven 6, Conn.
O'Keefe & Merritt Co., 3700 E. Olympic Blvd., Los Angeles 23, Calif.
Okun Co., A. L., 148-26-58th Ave., Flushing 55, N. Y.
Olmstead & Co., Chas. M., 14926 Mack Av., Detroit 24, Mich.
Olsen Mfg. Co., The C. A., Filbert St., Elyria, Ohio.
Olson & Co., Arthur A., Broad and Court Sts., Canfield, Ohio.
Omaha Stove Repair Works, Inc., 1206 Douglas St., Omaha 8, Nebr.
O'Neil-Irwin Mfg. Co., 394 Eighth Ave., Lake City, Minn.
Oran Co., 2232 S. Third St., Columbus 7, Ohio.
Original Metal Forming Machine Co., P. O. Box 214, Seattle 11, Wash.
Ormsby-Osterman Co., 3631 Cass Av., St. Louis 13, Mo.
Osborn Mfg. Co., 5401 Hamilton Av., Cleveland 14, Ohio.
OverHead Heaters, Inc., 1612 Book Bldg., Detroit 26, Mich.
Overly Mfg. Co., Greensburg, Pa.
Owens Co., H., 9300 Venice Blvd., Culver City, Calif.
Owens-Corning Fiberglas Corp., 1930 Nicholas Bldg., Toledo 1, Ohio.

P

Pabco Products Inc., 475 Brannan St., San Francisco 19, Calif.
Pacific Coast Heater Corp., 330 S. Del Mar Av., San Gabriel, Calif.
Pacific Gas Heating Co., 2948 Twentieth St., San Francisco 10, Calif.
Pacific Industrial Mfg. Co., 848 49th Ave., Oakland 1, Calif.
Pacific Lumber Co., 100 Bush St., San Francisco 4, Calif.
Pacific States Felt & Mfg. Co., Inc., 845 Howard St., San Francisco, Calif.
Pacific Transducer Co., Div., Clarkstan Corp., 11921 W. Pico Blvd., Los Angeles, Calif.
Packard Electric Div., General Motors Corp., Warren, Ohio.
Packham Crimper Co., Oak St. & N. Y. C. Depot, Mechanicsburgh, Ohio.
Packless Metal Hose, Inc., 31-42 Winthrop Ave., New Rochelle, N. Y.
Page Steel & Wire, Div. American Chain & Cable Co., Inc., Monessen, Pa.
Paine Co., Fullerton & Westgate Rd., Addison, Ill.
Pains Fireworks Display Co., Inc., 350 5th Ave., New York 1, N. Y.
Palmer Mfg. Corp., 2200 W. Fillmore, Phoenix, Ariz.
Palmer Thermometers, Inc., 2501 Norwood Av., Norwood, Cincinnati 12, Ohio.
Palo-Myers, Inc., 81-83 Reade St., New York 7, N. Y.
Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York 17, N. Y.
Pangborn Corp., 560 Pangborn Blvd., Hagerstown, Md.
Paragon Elec. Co., 1600 - 12th St., Two Rivers, Wis.
Paragon Oil Burner Corp., 75 Bridgewater St., Brooklyn 22, N. Y.
Paramount Supply Co., 2727 N. 48th St., Lincoln 4, Nebr.
Park City Cornice Works, Inc., 729 Union Av., Bridgeport 7, Conn.
Parker Appliance Co., 17325 Euclid Av., Cleveland 12, Ohio.
Parker-Kalon Corp., 200 Varick St., New York 14, N. Y.
Parker Rust-Proof Co., 2177 E. Milwaukee Av., Detroit 11, Mich.
Patco Mfg. Co., 231 N. Bread St., Philadelphia, Pa.
Patrol Valve Co., 2310 Superior Ave., N. E., Cleveland 14, Ohio.
Patten Co., J. V., 500 DeKalb Av., Sycamore, Ill.
Patterson-Kelley Co., Inc., East Stroudsburg, Pa.
Patterson-Sargent Co., St. Clair & 38th St., Cleveland 14, Ohio.
Paul Valve Corp., 683 Third Ave., New York 17, N. Y.
Paul-Lewis Laboratories, Inc., 4253 N. Port Washington Rd., Milwaukee 12, Wis.
Payne Furnace Div., Affiliated Gas Equipment, Inc., 801 Royal Oak Ave., Monrovia, Calif.
Peacard Co., M. A., 2038 Washington St., Roxbury Sta., Boston 19, Mass.
Peck, Stow & Wilcox Co., Center St., Southington, Conn.
Pecora Paint Co., 4th St. & Erie Av., Philadelphia 40, Pa.
Pedrick Tool & Machine Co., 3640 N. Lawrence St., Philadelphia 40, Pa.
Peer, Inc., 1440 Milton St., Benton Harbor, Mich.
Peerless Electric Co., 1401 W. Market St., Warren, Ohio.
Peerless Furnace and Foundry Co., 1853 Ludlow Av., Indianapolis 7, Ind.
Peerless of America, Inc., 1501 N. Magnolia, Chicago 22, Ill.
Peerless Sales, 4318 Sheridan Blvd., Lincoln 6, Nebr.
Peninsular Stove Co., 2699 Gratiot Av., Detroit 7, Mich.
Penn Boiler & Burner Mfg. Corp., Fruitville Rd., Lancaster, Pa.
Penn Brass & Copper Co., Erie, Pa.
Penn Controls, Inc., Goshen, Ind.
Penn Metal Co., Inc., 205 E. 42nd St., New York 17, N. Y.
Penn Supply & Metal Corp., 1831 N. Fifth St., Philadelphia 22, Pa.
Penn Tool Co., 124 E. Cumberland St., Philadelphia 25, Pa.
Penn Ventilator Co., Goodman Av., Philadelphia 40, Pa.
Pennant Corp., Grand Rapids, Mich.
Pennsylvania Engineering Corp., 526 S. Jefferson St., New Castle, Pa.
Pennsylvania Flexible Metallic Tubing Co., 72nd St. & Powers Lane, Philadelphia 42, Pa.
Pennsylvania Furnace & Iron Co., P. O. Box 269, Warren, Pa.
Pennsylvania Range Boiler Co., 24th & Ellsworth Sts., Philadelphia 46, Pa.
Pennsylvania Refining Co., Ohio Div., 2686 Lisbon Rd., Cleveland 4, Ohio.
Pennsylvania Salt Mfg. Co., 1000 Widener Bldg., Philadelphia 7, Pa.
Pennsylvania Wire Glass Co., 1612 Market St., Philadelphia 3, Pa.
Perfection Furnace Pipe Co., Toledo 4, Ohio.

Perfection Refrigeration Parts Co., Harvey, Ill.
Perfection Stove Co., 7609 Platt Av., Cleveland 4, Ohio.
Perfex Corp., 500 W. Oklahoma Av., Milwaukee 7, Wis.
Perkinson, William J., 412-14 N. Wolcott Av., Chicago 22, Ill.
Permutit Co., 330 W. 42nd St., New York 18, N. Y.
Pernot Corp., P. O. Box 368, Norwalk, Calif.
Perrygraf Corp., Maywood, Ill.
Peters-Dalton, Inc., 17900 Ryan Road, Detroit 12, Mich.
Petersen Mfg. Co., DeWitt, Nebr.
Peterson Co., B. A., 300 W. Railroad, Dowagiac, Mich.
Petro Div., Iron Fireman Mfg. Co., 3170 W. 106 St., Cleveland 11, Ohio.
Petroleum Heat & Power Co., Stamford, Conn.
Petroleum Solvent Corp., 331 Madison Av., New York 17, N. Y.
Petrometer Corp., 43-22 Tenth St., Long Island City 1, N. Y.
Pfanstiehl Chemical Co., 104 Lakeview Av., Waukegan, Ill.
Pfening Co., Fred D., 1075 W. 5th Av., Columbus 12, Ohio.
Phelps Dodge Copper Products Corp., British American Tube Div., 40 Wall St., New York 5, N. Y.
Phelps Mfg. Co., 801 Thomas St., Little Rock, Ark.
Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
Philadelphia Chain Block & Mfg. Co., Inc., Hancock & Norris Sts., Philadelphia, Pa.
Philadelphia Gear Works, Inc., Erie Av. and G St., Philadelphia 34, Pa.
Philadelphia Thermometer Co., 6th & Cayuga Sts., Philadelphia 40, Pa.
Philadelphia Tramrail Co., 3458 N. Weikel St., Philadelphia 34, Pa.
Phillips Cooling Tower Co., Inc., 220 Dupont St., Brooklyn 22, N. Y.
Phillips Drill Co., 4700 Fifth Av., Chicago 44, Ill.
Phillips & Buttorff Mfg. Co., 217 Third Av., N., Nashville, Tenn.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
Piatt Products Corp., 1149 S. Pennsylvania Ave., Lansing 4, Mich.
Pioneer Tool Co., 1103 Wisconsin Av., Racine, Wis.
Pioneer Water Heater Corp., 3131 San Fernando Rd., Los Angeles 65, Calif.
Pittsburgh Chemical Laboratories, Inc., 405 Penn Ave., Pittsburgh, Pa.
Pittsburgh Corning Corp., 307 Fourth Ave., Pittsburgh 22, Pa.
Pittsburgh Furnace Parts Co., 109 Federal St., Pittsburgh, Pa.
Pittsburgh Lectrodryer Corp., P. O. Box 1766, Pittsburgh 30, Pa.
Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.
Pittsburgh Water Heater Co., P. O. Box 4452, Pittsburgh 5, Pa.
Pittston Stove Co., P. O. Box 279, Pittston, Pa.
Plasteel Products Corp., McAdam Ave., Washington, Pa.
Plastergon Wall Board Co., Philadelphia Av., Buffalo 7, N. Y.
Plastic Products Co., 6475 Georgia Av., Detroit 11, Mich.
Pleasantaire Corp., 730 Tower Bldg., Washington 5, D. C.
Plummer Spray Equipment Co., 700 Filmore St., Napoleon, Ohio.
Plymouth Industries, Inc., 1932 Harrison Av., Plymouth, Ind.
Polaire Cooler Co., Inc., P. O. Box 117, El Mirage, Ariz.
Polis Mfg. Co., J. D., 2900-20 W. 26th St., Chicago 23, Ill.
Pollenex, 303 W. Monroe, Chicago, Ill.
Polo Pump Co., Polo, Ill.
Portable Electric Tools, Inc., 320 W. 83rd St., Chicago 20, Ill.
Portland Stove Foundry Co., 57 Kennebec St., Portland 2, Maine.
Potomac Mfg. Co., 318 S. 10th St., Philadelphia 7, Pa.
Potts-Farrington Co., 4250 Wissahickon Ave., Philadelphia 29, Pa.
Powder Power Tool Corp., 7526 S. W. Macadam Ave., Portland 1, Ore.
Powers Regulator Co., 3400 Oakton St., Skokie, Ill.
Prat-Daniel Corp., South Norwalk, Conn.
Precision Thermometer & Instrument Co., 1482 Brandywine St., Philadelphia 30, Pa.
Precision Welder Mfg. Co., 660 W. Grand Ave., Chicago, Ill.
Preferred Utilities Mfg. Corp., 1860 Broadway, New York 23, N. Y.
Premier Burner Co., 8816 Harkness Rd., Cleveland 6, Ohio.
Premier Furnace Co., Lock Box 150, Dowagiac, Mich.
Premier Metal Etching Co., 21-03 44th Av., Long Island City 1, N. Y.
Premier Stove Co., Belleville, Ill.
Premium Coal & Oil Co., 5830 Carthage Ave., Cincinnati 12, Ohio.
Presstite Engineering Co., 3900 Chouteau St., St. Louis 10, Mo.
Pressure Products Corp., 8225 N. Christiana Ave., Skokie, Ill.
Price Bros., Flexicore Div., E. Monument Ave., Dayton, Ohio
Pritchard & Co., J. F., Equipment Div., 210 W. 10th St., Kansas City 5, Mo.
Progressive Welder Sales Co., 3070 E. Outer Dr., Detroit 34, Mich.
Protective Coatings, Inc., P. O. Box 3985, Strathmoor Station, Detroit 27, Mich.
Pryne & Co., Inc., 140 N. Towne Ave., P. O. Box 698, Pomona, Calif.
Puhl & Hepper Mfg. Co., Inc., 6400 W. Florissant Av., St. Louis 20, Mo.
Pullman Vacuum Cleaner Co., 31-39 Allerton St., Boston 19, Mass.
Pyle-National Co., Multi-Vent Div., 1334 N. Kostner Av., Chicago 51, Ill.
Pyott Foundry & Machine Co., 328 N. Sangamon St., Chicago 7, Ill.
Pyramid Mouldings, Inc., 5353 W. Armstrong Av., Chicago 30, Ill.
Pyrolite Products Co., 1221-31 W. 74th St., Cleveland 2, Ohio.
Pyro-Jet Div. Riverside Steel Co., Wheeling, W. Va.

Q

Quad Stove Co., 78 East First St., Columbus, Ohio.
Quaker State Metals Co., Mountville, Pa.
Queen Stove Works, Inc., Albert Lea, Minn.
Quick Furnace & Supply Co., 215 Court Av., Des Moines 9, Iowa.
Quickdraft Co., Div. Hall's Safe Co., Inc., 1642 Cleveland Ave., N. W., Canton, Ohio.
Quiet Automatic Burner Corp., 33-35 Bloomfield Ave., Newark 4, N. J.
Quiet-Heet Mfg. Corp., 135 N. J. Railroad Av., Newark 5, N. J.
Quigley Co., Inc., 527 Fifth Av., New York 17, N. Y.
Quincy Stove Mfg. Co., 807 S. Front St., Quincy, Ill.

R

R. B. Enterprises, Inc., 2284 Maxwell, Detroit 14, Mich.
RCA-Estate Appliance Corp., Subsidiary of Radio Corporation of America, Hamilton, Ohio.
RCS Tool Sales Corp., P. O. Box 1434, Joliet, Ill.
R-S Products Corp., 4600 Germantown Ave., Philadelphia 44, Pa.
Racine Hydraulics & Machinery, Inc., 2000 Albert St., Racine, Wis.
Radiant-Aire Corp., Arthur St., Box 151, Michigan City, Ind.
Radiant Burners, Inc., 310 S. Main St., Lombard, Ill.
Radiant Utilities Corp., 8817 18th Ave., Brooklyn, N. Y.
Radiation Furnace Corp., Benton Harbor, Mich.
Radiator Specialty Co., 1700-1900 Dowd Rd., Charlotte 1, N. C.
Radio Corp. of America, Front & Cooper Sts., Camden, N. J.
Rajah Co., 53 Locust Av., Bloomfield, N. J.
Ralph Mfg. Co., Inc., P. O. Box 188, Wadsworth, Ohio.
Ramset Fasteners, Inc., 12117 Berea Rd., Cleveland, Ohio.
Ramtite Co., Div. S. Obermayer Co., 2563 W. 18th St., Chicago 8, Ill.
Ranco, Inc., 601 W. 5th Ave., Columbus 1, Ohio.
Randall Graphite Bearings, Inc., Greenlawn & Lake Sts., Lima, Ohio.
Ransome Co., 4030 Hollis St., Emeryville 8, Calif.
Rapid Heat Corp., 12317 Turner Av., Detroit 4, Mich.
Rapidesign, Inc., P. O. Box 592, Glendale, Calif.
Rawlplug Co., Inc., The, 271 Church St., New York 13, N. Y.
Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
Rayfield Co., C. L., 2010 S. Halsted St., Chicago 8, Ill.
Ray Oil Burner Co., 1301 San Jose Av., San Francisco 12, Calif.
Reading Chain & Block Corp., 2100 Adams St., Reading, Pa.
Reco Products Div., Refrigeration Engineering Corp., 150 Nassau St., New York 38, N. Y.
Redmond Co., Inc., Owosso, Mich.
Red Spot Electric Co., 7405 S. Tacoma Way, Tacoma 9, Wash.
Red Wing Oil Burner Co., Inc., 217 Mystic Ave., Medford 55, Mass.
Reed Engineering Co., 1003 W. Fairview, P. O. Box 415, Carthage, Mo.
Reed Unit-Fans, Inc., 1001 St. Charles Av., New Orleans 8, La.
Rees Blow Pipe Mfg. Co., 340 Seventh St., San Francisco 3, Calif.
Reeves Steel & Mfg. Co., Lock Box 107, Dover, Ohio.
Reflectal Corp., 155 E. 44th St., New York 17, N. Y.
Refractory & Insulation Corp., 120 Wall St., New York 5, N. Y.
Refrigeration Appliances, Inc., 923 W. Lake St., Chicago 7, Ill.
Refrigeration Economics Co., Inc., 1231 Tuscarawas St., E., Canton 2, Ohio.
Refrigeration Engineering, Inc., 7250 E. Slauson Ave., Los Angeles 22, Calif.
Rega Mfg. Co., 79 Mt. Hope Av., Rochester 20, N. Y.
Register & Grille Mfg. Co., Inc., 70 Berry St., Brooklyn 11, N. Y.
Rehm, R., 112 208th St., St. Albans 11, N. Y.
Reichert Float & Mfg. Co., 2238 Smead Av., Toledo 6, Ohio.
Reichhelm Co., Robert, Sniffen Lane, Stratford, Conn.
Reif-Rexoil, Inc., 37-41 Carroll St., Buffalo 3, N. Y.
Reilly Tar & Chemical Corp., 1615 Merchants Bank Bldg., Indianapolis 4, Ind.

Reiner & Campbell Co., Inc., 19 Euclid Ave. at Lockwood St., Box 5035, Newark 5, N. J.
Reliable Gas Products Co., 221 Third St., N. E., Cedar Rapids, Iowa.
Reliance Automatic Lighting Co., 1929 Mead St., Racine, Wis.
Reliance Electric & Engineering Co., 1058 Ivanhoe Rd., N. E., Cleveland 10, Ohio.
Reliance Refrigerating Machine Co., 3401 N. Kedzie Ave., Chicago, Ill
Reliance Regulator Div., American Meter Co., Inc., 1000 Meridian Ave., Alhambra, Calif.
Remco, Inc., Zelienople, Pa.
Remington Air Conditioning Div., Remington Corp., Auburn, N. Y.
Remington Arms Co., Inc., Barnum Ave., Bridgeport, Conn.
Rempe Co., 340 N. Sacramento Ave., Chicago 12, Ill.
Republic Heater Corp., 2231 Randolph St., Huntington Park, Calif.
Republic Products Co., 7420 State Rd., Philadelphia, Pa.
Republic Rubber Div., Lee Rubber & Tire Corp., Youngstown 1, Ohio.
Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
Research Products Corp., 1015 E. Washington Av., Madison 10, Wis.
Reuland Electric Co., Alhambra, Calif.
Revcor, 5201 N. Avondale Ave., Chicago 30, Ill.
Revere Copper and Brass, Inc., 230 Park Av., New York 17, N. Y.
Revere Products, Inc., 9145 E. Forest Av., Detroit 13, Mich.
Rex Roto Corp., 14414 Dexter Blvd., Detroit 6, Mich.
Rex Welder and Engineering Co., 409 Southwest Blvd., Kansas City 8, Mo.
Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
Reynolds Gas Regulator Co., 1416 Lincoln St., Anderson, Ind.
Reynolds Mfg. Co., Springfield 2, Mo.
Reynolds Metals Co., P. O. Box 2158, Louisville 1, Ky.
Reznor Mfg. Co., Mercer, Pa.
Rheem Mfg. Co., 570 Lexington Ave., New York 22, N. Y.
Rhoades Industries, Inc., Rand Hotel Bldg., Fargo, N. Dak.
Rhodes, Inc., M. H., 30 Bartholomew Av., Hartford 6, Conn.
Richards-Wilcox Mfg. Co., Third St., Aurora, Ill.
Richfield Mfg. Corp., 33 Lawton St., New Rochelle, N. Y.
Richmond Radiator Co., Affil. Reynolds Metals Co., 19 E. 47th St., New York 17, N. Y.
Riester & Thesmacher Co., 1526 W. 25th St., Cleveland 13, Ohio.
Riggin Metal Products, Box 267, Kankakee, Ill.
Rigidbilt, Inc., 2850 W. Fulton St., Chicago 12, Ill.
Rigidized Metals Corp., 699-P Ohio St., Buffalo 3, N. Y.
Rinehart Inc., Richmond, Ind.
Ripper, Box 681, Yakima, Wash.
Rival Strap Corp., 308 W. 20th St., New York 11, N. Y.
Riverside Machinery Co., 4000 4th Ave., S., Minneapolis, Minn.
Riverton Lime & Stone Co., Inc., Riverton, Va.
Robbins & Myers, Inc., 1345 Lagonda Av., Springfield 99, Ohio.
Roberts Co., S. R., Marshall, Mich.
Roberts-Gordon Appliance Co., 44 Central Ave., Buffalo 6, N. Y.
Robertshaw Thermostat Div., Robertshaw-Fulton Controls Co., Youngwood, Pa.
Robertson, F. L., 56 Rano St., Buffalo, N. Y.
Robertson Co., H. H., 2400 Farmers Bank Bldg., Pittsburgh 22, Pa.
Robinson Aviation, Inc., Teterboro, N. J.
Robinson Heaters, Inc., Columbus 1, Ohio.
Robinson Insulation Co., P. O. Box 1419, Great Falls, Mont.
Rochester Mfg. Co., Inc., 66 Rockwood St., Rochester 10, N. Y.
Rockford Screw Products Co., 2501 Ninth St., Rockford, Ill.
Rock Island Register Co., 2435 Fifth Av., Rock Island, Ill.
Roebling's Sons Co., John A., 640 S. Broad St., Trenton 2, N. J.
Roesch Tool Co., 3461 Grand View Blvd., Los Angeles 34, Calif.
Roessing Mfg. Co., 1616 Noble St., Sharpsburg, Pittsburgh 15, Pa.
Rohm & Haas Co., 222 W. Washington St., Philadelphia, Pa.
Rome-Turney Radiator Co., Canal St., Rome, N. Y.
Ronci Machine Co., Inc., F., 2 Atlantic Blvd., Centredale 11, R. I.
Roofing & Supply Co., 1409-15 Fort St., Chattanooga, Tenn.
Roper Corp., Geo. D., Blackhawk Park Av., Rockford, Ill.
Rosebraugh Co., W. W., 680 S. 17th St., Salem, Ore.
Rosedale Foundry & Machine Co., Columbus & Preble Ave., N. S. Pittsburgh 12, Pa.
Rose Mfg. Co., 1731 Arapahoe St., Denver 2, Colo.
Ross Sprinkler Co., 34 Roberts St., Pasadena 3, Calif.
Rossaul Co., 170 Fifth Ave., New York 10, N. Y.
Rossoe Mfg. Co., 413 Fairview Ave., N., Seattle, Wash.
Rotary Concrete Drill Co., 650 S. Arroyo Parkway, Pasadena 2, Calif.
Rotex Punch Co., 4726 E. 12th St., Oakland 1, Calif.
Roto-Table Co., 2605 E. Third St., Dayton 3, Ohio.
Rotor Corp., P. O. Box 42, Far Hills Br., Dayton 9, Ohio.
Rotor Tool Co., 26300 Lakeland Blvd., Cleveland 23, Ohio.
Round Oak Co., Inc., of Indiana, Dowagiac, Mich.
Royal-Apex Mfg. Co., Inc., 1389-97 Atlantic Ave., Brooklyn 16, N. Y.
Royal Heaters, Inc., 1024 Westminster Av., Alhambra, Calif.
Royal Ventilator Co., 415 Locust St., Philadelphia 6, Pa.
Royersford Foundry & Machine Co., 55 Main St., Royersford, Pa.
Ruberoid Co., 500 Fifth Av., New York 18, N. Y.
Ruby Chemical Co., 74 McDowell St., Columbus 8, Ohio.
Ruby Management Co., 620 Brookline Blvd., Pittsburgh 26, Pa
Ruemelin Mfg. Co., 3860 N. Palmer St., Milwaukee 12, Wis.
Ruggles-Klingemann Mfg. Co., 4 Foster Ct., Salem, Mass.
Russell Co., F. C., 1100 Chester Ave., Cleveland 1, Ohio.
Russell Mfg. Co., Inc., John M., Box 246, Naugatuck, Conn.
Rust-Oleum Corp., Evanston, Ill.
Rutland Fire Clay Co., 91 Curtis Av., Rutland, Vt.
Ruud Mfg. Co., 2934 Smallman St., Pittsburgh 1, Pa.
Rybolt Heater Co., 615 Miller St., Ashland, Ohio.
Ryerson & Son, Inc., Joseph T., 2558 W. 16th St., Chicago 80, Ill.
Ryniker Steel Products Co., 11-19 N. 25th St., Billings, Mont.

S

S-K Co., Inc., Admiral Wilson Blvd., Camden, N. J.
SKF Industries, Inc., Front St. and Erie Av., Philadelphia 32, Pa.
S.O.S. Products Co., Inc., 282 Nassau Ave., Brooklyn 22, N. Y.
St. Charles Mfg. Co., St. Charles, Ill.
St. Clair Foundry Corp., Beech & Wilson Sts., Centralia, Ill.
St. Clair Metal Products Co., 3802 Scovile, Cleveland, Ohio.
St. Clair Rubber Co., Marysville, Mich.
St. Louis Furnace Mfg. Co., 2710 N. 25th St., St. Louis 6, Mo.
St. Louis Tool Co., 6100 Prescott St., St. Louis 15, Mo.
St. Paul Corrugating Co., South Wabasha & Water Sts., St. Paul 1, Minn.
Sall Mountain Co., Box 777, Hamilton, Ohio.
Sampsel Time Control, Inc., Spring Valley, Ill.
Samuel Stamping & Enameling Co., Manufacturers Rd., Chattanooga, Tenn.
San Angelo Foundry & Machine Co., Drawer 1587, San Angelo, Texas.
Sandberg Mfg. Co., 3850 N. W. Yeon Av., Portland 10, Ore.
Sandee Mfg. Co., 5050 W. Foster Ave., Chicago, Ill.
Sanders, J. A., Box 123, Fulton, N. Y.
Sangamo Electric Co., 1301 N. 11th St., Springfield, Ill.
Santa Clara Metal Products Co., 751 Martin Av., Santa Clara, Calif.
Santa Fe Tank & Tower Co., 5401 S. Boyle Ave., Los Angeles 11, Calif.
Saran Lined Pipe Co., 2415 Burdette Ave., Ferndale 20, Mich.
Sarco Co., Inc., Empire State Bldg., New York 1, N. Y.
Sarcotherm Controls, Inc., Empire State Bldg., New York 1, N. Y.
Sauereisen Cements Co., Sharpsburg Station, Pittsburgh 15, Pa.
Savage Co., W. J., 912 W. Clinch Av., Knoxville 1, Tenn.
Schaefer Brush Mfg. Co., 115-117 W. Walker, Milwaukee 4, Wis.
Scheck, William, 353 Shaler Blvd., Ridgefield, N. J.
Schecter Bros. Co., N. W. Cor. Hancock & Huntington Sts., Philadelphia 33, Pa.
Schild Mfg. Co., 301 N. Market St., Dallas 2, Texas.
Schill Mfg. Co., 302 Mansfield St., Crestline, Ohio.
Schnacke, Inc., 1101 N. Governor St., Evansville, Ind.
Schoedinger, F. O., 322-358 Mt. Vernon Av., Columbus 16, Ohio.
Schori Process Div. Ferro-Co. Corp., 8 Forty-third Rd., Long Island City 1, N. Y.
Schwab Furnace Co., 332 W. Florida St., Milwaukee 4, Wis.
Schwab Safe Co., East Maine and Boulevard, Lafayette, Ind.
Schwitzer-Cummins Co., 1125 Massachusetts Ave., Indianapolis 7, Ind.
Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
Scientiae Tool Co., 101 Pine St., Dayton, Ohio.
Scott-Newcomb, Inc., 1442 S. Boyle Ave., St. Louis 10, Mo.
Scovill Mfg. Co., Waterville Div., Waterville, Conn.
Scully Signal Co., 88 First St., Cambridge 41, Mass.
Seamlex Co., Inc., 41-23 24th St., Long Island City 1, N. Y.
Seco-Lite Mfg. Co., 4916 Easton Av., St. Louis 13, Mo.
Selas Corp. of America, Erie Ave. and D St., Philadelphia 34, Pa.
Selectrol Engineering Co., 2036 McDonald Av., Brooklyn 23, N. Y.

Semet-Solvay Engineering Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.
Sequoia Mfg. Co., 1000 Brittan Av., San Carlos, Calif.
Servel, Inc., Electric Refrigeration Div., 119 Morton Av., Evansville 20, Ind.
Set Screw & Mfg. Co., 11 Main St., Bartlett, Ill.
Severson Mfg. & Supply Co., 1034 W. Somers St., Milwaukee 5, Wis.
Shafer Bearing Corp., P. O. Box 57, Downers Grove, Ill.
Shakeproof Div., Illinois Tool Wks., 2501 N. Keeler Av., Chicago 39, Ill.
Shallcross Controls, Inc., 2217-21 N. 31st St., Milwaukee 8, Wis.
Shambien Furnace Parts Co., 625 Hillsboro St., Pittsburgh 4, Pa.
Shank Co., Cyrus, 625 W. Jackson Blvd., Chicago 6, Ill.
Sharon Steel Corp., Drawer 537, Sharon, Pa.
Shedlov Oil Burners, Inc., 723 Third Av., S. Minneapolis 2, Minn.
Sheet Metal Mfg. Co., Inc., 953 Myrtle Av., Brooklyn 6, N. Y.
Sheet Metal Products Co., 320 S. Commercial St., Peoria 2, Ill.
Sheet Metal Specialty Div., Follansbee Steel Corp., 3rd & Liberty Av., Pittsburgh, Pa.
Shell Oil Co., 50 W. 50th St., New York 20, N. Y.
Shepard Niles Crane & Hoist Corp., 410 Schuyler Av., Montour Falls, N. Y.
Sheridan-Gray, Inc., 405 Via Chico, Palos Verdes Estates, Calif.
Sherman & Co., 36-07 Prince St., Flushing 54, N. Y.
Sherwin-Williams Co., 101 Prospect Ave., N. W., Cleveland 1, Ohio.
Siemon Mfg. Co., 1819 Holmes St., Kansas City 8, Mo.
Sight Feed Generator Co., P. O. Box 38, West Alexandria, Ohio.
Signal Electric Mfg. Co., P. O. Box 75, Menominee, Mich.
Silent Sioux Corp., Orange City, Iowa.
Silvercote Products, Inc., 161 E. Erie St., Chicago 11, Ill.
Simonds Saw & Steel Co., 470 Main St., Fitchburg, Mass.
Simplex Mfg. Co. 200 N. Main St., Fond du Lac, Wis.
Simplex Oil Heating Corp., 7901 Oxford Av., Philadelphia 11, Pa.
Simpson Screen Co., 1050 E. 8th St., Oakland 6, Calif.
Sioux Steel Co., Sioux Falls, S. Dak.
Sipe & Co., James B., 118 Vanadium Rd., Pittsburgh 16, Pa.
Sisalkraft Co., The, 205 W. Wacker Dr., Chicago 6, Ill.
Skil Corp., 5033 Elston Av., Chicago 30, Ill.
Skilbeck Mfg. Co., 7432 27th Av., Kenosha, Wis.
Skinner Electric Valve Div., The Skinner Chuck Co., 40 Belden Ave., Norwalk, Conn.
Skinner Heating & Ventilating Co., Div. St. Louis Blow Pipe & Heater Co., Inc., 1954 N. 9th St., St. Louis 6, Mo.
Skuttle Mfg. Co., 4099 Beaufait Ave., Detroit 7, Mich.
Slip-On, Inc., 401 Broadway, New York, N. Y.
Sly Mfg. Co., W. W., 4736 Train Av., Cleveland 2, Ohio.
Small Lot Stamping Co., 1025 W. Blancke St., Linden, N. J.
Small Motors, Inc., 2076 Elston Av., Chicago 14, Ill.
Smith Co., J. B., 3327 B St., Philadelphia 34, Pa.
Smith Corp., A. O., Milwaukee 1, Wis.
Smith Filter Corp., 2nd Av., Moline, Ill.
Smith Furnace Co., 216 S. Croton Ave., New Castle, Pa.
Smith, R. E., 1806 Belvidere St., Waukegan, Ill.
Smith & Son., Inc., Seymour, Box 591, Oakville, Conn.
Smith Welding Equipment Corp., 2633 Fourth St., S. E., Minneapolis 14, Minn.
Smooth-on Mfg. Co., 568-574 Communipaw Av., Jersey City 4, N. J.
Snap-On Mfg. Co., 1028 Blue Island Av., Chicago, Ill.
Snap-On Tools Corp., Kenosha, Wis.
Solvay Process Div., Allied Chemical & Dye Corp., 61 Broadway, New York 6, N. Y.
Somers, Inc., H. J., 6063 Wabash Av., Detroit 8, Mich.
Sonneborn Sons, Inc., L., 80 Eighth Ave., New York 11, N. Y.
Sonner Burner Co., P. O. Box 903, Winfield, Kans.
Sonoco Products Co., Hartsville, S. C.
Soreng Mfg. Co., 9551 Soreng Ave., Schiller Park, Ill.
Soss Mfg. Co., 21777 Hoover Rd., Detroit 13, Mich.
South Bend Air Products, Inc., 322 E. Colfax, South Bend 22, Ind.
Southbridge Roofing Co., Inc., Hartwell & Chapin Sts., Southbridge, Mass.
Southco Div., South Chester Corp., Finance Bldg., Philadelphia 2, Pa.
Souther Iron Co., E. E., 1952 Kienlen Av., St. Louis 20, Mo.
Southern Air Conditioning Mfg. Co., 1309 Calhoun St., Fort Worth 2, Texas.
Southern Aircraft Co., Garland, Dallas Co., Texas.
Southern States Iron Roofing Co., Stiles Av. & Louisville Rd., Savannah, Ga.
Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
Southwestern Heater Corp., 309 Browder St., Dallas, Texas.
Southwest Mfg. Co., Aurora, Mo.
Southwest Mfg. Co., Box 1615, Santa Ana, Calif.
Spark Stove Co., Inc., 2619 E. 12th St., Oakland 1, Calif.
Sparkler Mfg. Co., Mundelein, Ill.
Spear Stove & Heater Co., James, 1000 Diamond St., Philadelphia 22, Pa.
Speco, Inc., 7308 Associate Ave., Cleveland 9, Ohio.
Speedway Mfg. Co., 1854 S. 52nd Ave., Cicero 50, Ill.
Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
Spencer Turbine Co., 484 New Park Av., Hartford 6, Conn.
Sperry & Co., D. R. Batavia, Ill.
Sperti, Inc., Beech St. at Kenilworth Av., Norwood, Cincinnati 12, Ohio.
Sponge Rubber Products Co., 280 Derby Place, Shelton, Conn.
Sporlan Valve Co., 7525 Sussex Av., St., Louis 17, Mo.
Spotweld Co., 3762 Ridge Rd., Cleveland, Ohio.
Sprague Products Co., North Adams, Mass.
Spray Engineering Co., 114 Central St., Somerville 45, Mass
Spraying Systems Co., 3201 Randolph St., Bellwood, Ill.
Sprayo-Flake Co., 2715 Irving Park Blvd., Chicago 18, Ill.
Sprouse Co., Inc., V. E., 1804 22nd St., Columbus, Ind.
Spun Steel Div., Automatic Steel Products, Inc., 1201 Camden Av., S. W., Canton 6, Ohio.
Square D Co., 6060 Rivard St., Detroit 11, Mich.
Square D Co., Industrial Controller Div., 4041 N. Richards St., Milwaukee 12, Wis.
Stamco Inc., New Bremen, Ohio.
Standard Arcoil Corp., 21-23 Broad St., Newark 4, N. J.
Standard Asbestos Mfg. Co., 860 W. Evergreen Ave., Chicago 22, Ill.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Standard Fuel Engineering Co., 667 Post Av., S., Detroit 17, Mich.
Standard Furnace Supply Co., Ltd., 411-17 S. Tenth St., Omaha 8, Nebr.
Standard Heating Equipment Co., 1406 E. Fourth St., Waterloo, Iowa.
Standard Power Groove Machine Corp., 99 Hudson St., New York 13, N. Y.
Standard Remote Control Valve Co., 205 Pasadena Av., South Pasadena, Calif.
Standard Rolling Mills, Inc., 196 Diamond St., Brooklyn 22, N. Y.
Standard Stamping & Perforating Co., 3137 W. 49th Pl., Chicago, Ill.
Standard Ventilator Co., Lewisburg, Pa.
Stanley Electric Tool Div., The Stanley Works, 480 Myrtle St., New Britain, Conn.
Stanley Tools, New Britain, Conn.
Star Expansion Bolt Co., 147 Cedar St., New York 6, N. Y.
Star Heater Co., 1012 Powhattan St., Dallas, Texas.
Star Stainless Screw Co., 195 Union Ave., Paterson, N. J.
Stark & Co., H. W., 5668 Geddes Rd., Ann Arbor, Mich.
Star-Kimble Motor Div., Miehle Printing Press & Mfg. Co., 200 Bloomfield Av., Bloomfield, N. J.
State Steel Products, Inc., 2500 E. 23rd St., Los Angeles 11, Calif.
Steel City Furnace Co., Springdale, Pa.
Steel Products Engineering Co., Combustioneer Div., 1205 W. Columbia St., Springfield, Ohio.
Steel & Tubes Div., Republic Steel Corp., 216 E. 131st St., Cleveland 8, Ohio.
Steele Mfg. Co., 445 Winchester Ave., Ashland, Ky.
Stefco Steel Co., 41 Roeske Av., Michigan City, Ind.
Steffens-Amberg Co., 262 Morris Av., Newark 3, N. J.
Steinen Mfg. Co., Wm., 43 Bruen St., Newark, N. J.
Stephens-Adamson Mfg. Co., Ridgeway Av., Aurora, Ill.
Stephens Mfg. Co., 2507 East 15th St., Tulsa, Okla.
Sterling Air Conditioning Corp., 519 Bond Bldg., Washington, D. C.
Sterling Burner Corp., 14015 Hamilton Av., Detroit 3, Mich.
Sterling Electric Motors, Inc., 5401 Telegraph Rd., Los Angeles 22, Calif.
Sterling Engineering Co., 7402 Lansdowne Av., St. Louis 19, Mo.
Sterling Foundry Co., P. O. Box 457, Sterling, Ill.
Stewart Co., W. H., 420 E. Grand Av., Oklahoma City 2, Okla.
Stewart Ice Machine Co, 1282 W. 1st St., Pomona, Calif.
Stewart Mfg. Co., Grove Ave., Cedar Grove, N. J.
Stewart Mfg. Co., 320 E. St. Joseph St., Indianapolis 2, Ind.
Stewart-Warner Corp., South Wind Div., 1514 Drover St., Indianapolis 7, Ind.
Stic-Klip Mfg. Co., P. O. Box 83, Cambridge 40, Mass.
Stoker-Lad Co., Division & I Sts., Tacoma 3, Wash.
Stokar-Ola Mfg. Co., 2400 S. Adams St., Peoria, Ill.
Stokol Stoker Co., Inc., 1600 Webster St., Dayton, Ohio.

Stonewall Co., 54th & LaSalle St., Chicago, Ill.
Stortz & Son, Inc., John, 210 Vine St., Philadelphia 6, Pa.
Stossel & Sons Co., Carl, Front Royal, Va.
Stow Mfg. Co., 445 State St., Binghamton, N. Y.
Strandwitz & Co., Inc., W. J., Jefferson and Master St., Camden, N. J.
Stratton & Terstegge Co., 1501 W. Main St., Louisville 1, Ky.
Structural Slate Co., The, E. Main St., Pen Argyl, Pa.
Sudbury Laboratory, South Sudbury, Mass.
Sullivan Valve & Engineering Co., P. O. Box 1931, Butte, Mont.
Sunbeau Heater Co., 3510 S. Hill St., Los Angeles 7, Calif.
Sundstrand Engineering Co., 1325 Seventh St., Rockford, Ill.
Sundstrand Machine Tool Co., Hydraulic Div., 2531 Eleventh St., Rockford, Ill.
Sun-Fire Stoker Corp., 802 E. Eighth St., New Albany, Ind.
Sunny Sue Burner Co., 108 Annetta St., Syracuse, N. Y.
Sun-Ray Burner Mfg. Corp., 139-24 Queens Blvd., Jamaica 2, N. Y.
Sunshine Mantle Co., Chanute, Kans.
Superbo Mfg. Co., 4090 N. Mission Rd., Los Angeles 33, Calif.
Super Radiator Corp., 6714 Walker St., Minneapolis 16, Minn.
Superior Controls Co., Inc., 1835 S. Bonnie Brae, Los Angeles 6, Calif.
Superior Flux & Mfg. Co., 1302 Ontario St., Cleveland 13, Ohio.
Superior Furnace & Mfg. Co., 322 Hamilton, Plymouth, Mich.
Superior Mfg. Co., Alexandria, Ind.
Superior Mfg. Co., 3204 Penn Ave., Pittsburgh 1, Pa.
Superior Metal Fabricating Co., Pleasant Ave., Niles, Ohio.
Superior Pneumatic & Mfg. Inc., 4758 Warner Rd., Cleveland 25, Ohio.
Superior Products Co., 606 S. 14th St., Omaha 2, Nebr.
Superior Safety Furnace Pipe Co., 5820 Forsythe Av., Detroit 2, Mich.
Superior Steel Corp., Grant Bldg., Pittsburgh, Pa.
Superior Valve and Fittings Co., 1509 W. Liberty Ave., Pittsburgh 26, Pa.
Supreme Electric Products Corp., 194 Vassar St., Rochester 7, N. Y.
Supreme Gas Burner Mfg. Co., 212 Oakwood Rd., Holly, Mich.
Sure Comfort Furnace Co., 900 S. Des Plaines Ave., Forest Park, Ill.
Surface Combustion Corp., Toledo 1, Ohio.
Sutton Corp., O. A., 1812 W. Second St., Wichita 2, Kans.
Swaine Mfg. Co., Fred J., 1300 N. Seventh St., St. Louis 6, Mo.
Swartwout Co., 18511 Euclid Av., Cleveland 12, Ohio.
Swift Electric Welder Co., 8095 Livernois Ave., Detroit 4, Mich.
Swirling Heat Corp., 2818 N. Washington Blvd., Arlington, Va.
Swirling Oil Burner Mfg. Corp., 22-15 37th Av., Long Island City 1, N. Y.
Synchronous Flame, Inc., 327 S. LaSalle St., Chicago, Ill.
Syncromatic Corp., 1141 Tenth St., Watertown, Wis.
Syntron Co., 275 Lexington, Homer City, Pa.

T

Tamms Industries, Inc., 228 N. LaSalle St., Chicago 1, Ill.
Tannewitz Works, 315 Front Av., N. W., Grand Rapids 2, Mich.
Taylor Appliance & Mfg. Co., 339 W. Parent, Royal Oak, Mich.
Taylor Instrument Cos., 95 Ames St., Rochester 1, N. Y.
Taylor-Winfield Corp., 1052 Mahoning Av., N. W., Warren, Ohio.
Technical Processes Div., Colonial Alloys Co., Ridge Av. & Crawford St., Philadelphia 29, Pa.
Techniflex Corp., Port Jervis, N. Y.
Tecumseh Products Co., Tecumseh, Mich.
Telechron, Inc., Ashland, Mass.
Temco, Inc., 4104 Park Av., Nashville 9, Tenn.
Tempo Products Co., 1900 Euclid Av., Cleveland 15, Ohio.
Temprite Products Corp., East Maple Rd., Birmingham, Mich.
Tennessee Coal & Iron Div., U. S. Steel Corp., Box 599, Fairfield, Ala.
Tennessee Products & Chemical Corp., American Natl. Bank Bldg., Nashville 3, Tenn.
Tenney Engineering Inc., 26 Avenue B, Newark 5, N. J.
Termite Drills, Inc., 99 N. Lotus St., Pasadena 8, Calif.
Tesco, Inc., 110 S. Norfolk, Tulsa, Okla.
Thatcher Furnace Co., Centre St., Garwood, N. J.
Thermac Co., 800 E. 108th St., Los Angeles 2, Calif.
Thermador Electrical Mfg. Co., Inc., 5119 District Blvd., Los Angeles 22, Calif.
Thermal Industries, Indio, Calif.
Thermex Engineering Co., 400 N. Oakley Blvd., Chicago 12, Ill.
Thermix Corp., The, Greenwich, Conn.
Thermoid Co., Whitehead Rd., Trenton 6, N. J.
Therm Oil Burner Co., 2105 Westlake Av., Seattle 1, Wash.
Thermomatic Corp., Church & Elm Sts., Willoughby, Ohio.
Thermo-O-Disc, Inc., 127 Crouse St., Mansfield, Ohio.
Thermo-Products, Inc., North Judson, Ind.
Thomas Machine Mfg. Co., Etna P. O., Pittsburgh 23, Pa.
Thompson Mfg. Co., A. F., 1040 Vernon St., Huntington, W. Va.
Thompson & Co., 1085 Allegheny Av., Oakmont, Pa.
Thomson Electric Welder Co., 161 Pleasant St., Lynn, Mass.
Thor Metal Products Co., Inc., Box 118, Eastwood Station, Syracuse 6, N. Y.
Thor Tool & Die Co., 865 Estabrook St., San Leandro, Calif.
Tierney Rotor Ventilator Co., 239 4th Ave., S., Minneapolis, Minn.
Tiffin Art Metal Co., Box 807, Tiffin, Ohio.
Tiffin Eaves Trough Clamp Co., 25 Miami St., Tiffin, Ohio.
Time Saver Tools, Inc., Mundelein, Ill.
Timken Roller Bearing Co., The, 1835 Dueber Ave., S. W., Canton 6, Ohio.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tinit Mfg. Co., Inc., 1635-39 Platte St., Denver 2, Colo.
Tinnerman Products, Inc., P. O. Box 6688, Cleveland 1, Ohio.
Titan Valve & Mfg. Co., 9913 Elk Av., Cleveland, Ohio.
Titeflex, Inc., 500 Frelinghuysen Av., Newark 5, N. J.
Titus, Inc., 1304 Broadway, Waterloo, Iowa.
Titus Mfg. Corp., 113 E. Eighth St., Waterloo, Iowa.
Tjernlund Mfg. Co., 2140 Kasota St., St. Paul 8, Minn.
Toch Bros., Inc., 2600 Richmond Ter., Staten Island 3, N. Y.
Toledo Heater Co., 25 S. St., Clair St., Toledo 4, Ohio.
Topflight Tool Co., 116 E. Market St., York, Pa.
Toridheet Div., Cleveland Steel Products Corp., Madison Ave. at W. 74th St., Cleveland 2, Ohio.
Torit Mfg. Co., 292 Walnut St., St. Paul 2, Minn.
Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
Torq Electric Corp., 1002 Interstate St., Bedford, Ohio.
Torrington Mfg. Co., 70 Franklin St., Torrington, Conn.
Townsend Co., 206 River Rd., New Brighton, Pa.
Townsend Co., Cherry Rivet Div., Santa Ana, Calif.
Trade-Wind Motorfans, Inc., 5725 S. Main St., Los Angeles 37, Calif.
Trane Co., The, LaCrosse, Wis.
Tremont Nail Co., Box 111, Wareham, Mass.
Triad Products Corp., 5121 N. Clark St., Chicago 40, Ill.
Triangle Mfg. Co., 338 Division St., Oshkosh, Wis.
Trindl Products, Ltd., 17 E. 23rd St., Chicago 16, Ill.
Trion, Inc., 1000 Island Ave., McKees Rocks, Pa.
Tri-Saw Corp., 6611 Clayton Rd., St. Louis 17, Mo.
Tri-State Heating Supply Inc., 234-236 Murray St., Fort Wayne 5, Ind.
Tropic-Air Stoker Co., 2017 Indiana Way, N. E., Canton 5, Ohio.
Tropical Paint & Oil Co., 1244-86 W. 70th St., Cleveland, Ohio.
Truflo Fan Co., 523 Main St., Harmony, Pa.
Tru-Heet Co., 532 Miller Ave., Trenton 10, N. J.
Tru-Mac Mfg. Co., 24 Woburn St., Reading, Mass.
Truscon Laboratories, Caniff & Grand Trunk R. R., Detroit 11, Mich.
Truscon Steel Co., Albert St., Youngstown 1, Ohio.
Tubular Rivet & Stud Co., Wollaston 70, Mass.
Turb-O-Tube Furnace, Inc., 204 Rhode Island St., Buffalo 13, N. Y.
Turco Products, Inc., P. O. Box 2649, Terminal Annex, Los Angeles 54, Calif.
Turner & Seymour Mfg. Co., Lawton St., Torrington, Conn.
Turner Brass Works, 821 Park Av., Sycamore, Ill.
Tuthill Pump Co., 939 E. 95th St., Chicago 19, Ill.
Tuttle & Bailey, Inc., Corbin Av., New Britain, Conn.
Tweco Products Co., Box 666, Wichita 1, Kans.
Twin City Gas Specialty Co., 710 W. 27th St., Minneapolis 8, Minn.
Twin Control Burner Mfg. Co., 3240 Barker Ave., New York 67, N. Y.
Typhoon Air Conditioning Co., Inc., 794 Union St., Brooklyn 15, N. Y.

U

Uehling Instrument Co., 473 Getty Av., Paterson 3, N. J.
Unexcelled Chemical Corp., 350 5th Ave., New York 1, N. Y.
Uniflex Metal Hose Corp., 52 Hendee St., Springfield, Mass.
Union Mfg. Co., Inc., 6th & Washington Sts., Boyertown, Pa.

Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City 7, N. J.
Union Steam Pump Co., Capitol Ave., S. W., Battle Creek, Mich.
Unique Mfg. Co., Inc., 221 W. Walton St., Chicago 10, Ill.
United Air Heaters, Inc., Medical Arts Bldg., Seattle, Wash.
United-Carr Fastener Corp., 31 Ames St., Cambridge 42, Mass.
United Chromium, Inc., 100 E. 42nd St., New York 17, N. Y.
United Conditioning Corp., Croton Falls, N. Y.
United Cooling Tower Co., Porter Bldg., Kansas City 2, Mo.
United Cork Cos., Central Av. & N. J. Central R. R., Kearney, N. J.
United Electric Controls Co., 69 "A" St., South Boston 27, Mass.
United Gilsonite Laboratories, Scranton 1, Pa.
United Industries, Box 449, Madison 1, Wis.
United Metal Hose Co., Inc., 36-01 43rd Av., Long Island City 1, N. Y.
U. S. Air Conditioning Corp., Como Av. S. E. at 33rd, Minneapolis 14, Minn.
U. S. Electrical Motors, Inc., 200 E. Slauson Av., Los Angeles 54, Calif.
U. S. Electrical Tool Co., 1050 Findlay St., Cincinnati 14, Ohio.
U. S. Expansion Bolt Co., Inc., P. O. Box 827, York, Pa.
U. S. Gauge Div. American Machine & Metals, Inc., Sellersville, Pa.
U. S. Gypsum Co., 300 W. Adams St., Chicago 6, Ill.
U. S. Machine Corp., Lebanon, Ind.
U. S. Mineral Wool Co., South Milwaukee, Wis.
U. S. Radiator Corp., 300 Buhl Bldg., Detroit 31, Mich.
U. S. Register Co., 324 E. Burnham St., Battle Creek, Mich.
U. S. Rock Wool Co., 22 Richards St., Salt Lake City 1, Utah.
U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
U. S. Steel Co., Sub. U. S. Steel Corp., 525 Wm. Penn Pl., Pittsburgh 30, Pa.
U. S. Steel Supply Co., 1319 Wabansia Av., Chicago 90, Ill.
U. S. Stoneware Co., 60 E. 42nd St., New York, N. Y.
U. S. Stove Co., Cedar Av., South Pittsburg, Tenn.
United Wire & Supply Corp., 1497 Elmwood Ave., Providence 7, R. I.
Universal Air Filter Corp., 332 W. Michigan St., Duluth 2, Minn.
Universal Blower Co., 1090 S. Adams Av., Birmingham, Mich.
Universal-Cyclops Steel Corp., Drawer 153, Bridgeville, Pa.
Universal Diffuser Corp., 890 Whittier St., New York, N. Y.
Universal Steel Fabricating Co., 570 Mercer, Seattle, Wash.
Universal Welder Corp., 735 Carnegie Av., Cleveland 15, Ohio.
Uno Ventilator Co., 1236 Eastern Av., Malden 48, Mass.
Utica Products, Inc., Utica 4, N. Y.
Utility Appliance Corp., 4851 S. Alameda St., Los Angeles 58, Calif.

V

Vacuum-Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.
Vacuum Gas Burner Corp., 132 N. 1st St., Olean, N. Y.
Vallas, Lionel, 2850 W. Lake St., Chicago 12, Ill.
Valley Electric Co., 4221 Forest Park, St. Louis, Mo.
Van Noorden Co., E., 100 Magazine St., Boston 19, Mass.
Van-Packer Corp., 209 S. LaSalle St., Chicago 4, Ill.
Van Products Co., 3734-97 W. 12th St., Erie, Pa.
Van's Gas Burner Service, 20420 Elkhart, Detroit 24, Mich.
Vapor Heating Corp., 80 E. Jackson Blvd., Chicago 4, Ill.
Vectaire Mfg. Co., 251 Howard St., Melrose, Mass.
Velocity-Power Tool Co., 7505 Thomas Blvd., Pittsburgh 8, Pa.
Vent-O-Lite Co., 4230 W. Taylor St., Chicago 24, Ill.
Verson Allsteel Press Co., 1351 E. 93rd St., Chicago 19, Ill.
Vibration Eliminator Co., 10-28 47th Av., Long Island City 1, N. Y.
Victor Equipment Co., Welding Equipment Div., 844-54 Folsom St., San Francisco 7, Calif.
Viking Air Conditioning Corp., 5601 Walworth Av., Cleveland 2, Ohio.
Viking Mfg. Corp., 1747 Chester Av., Cleveland 14, Ohio.
Viking Pump Co., 410 State St., Cedar Falls 1, Iowa.
Viking Shear Co., 1063 W. 19th St., Erie, Pa.
Vilter Mfg. Co., 2217 S. First St., Milwaukee 7, Wis.
Vinco Products, 326 Bond St., Asbury Park, N. J.
Vital Products Mfg. Co., 7500 Quincy Av., Cleveland 4, Ohio.
Vogt Machine Co., Henry, 1000 W. Ormsby St., Louisville 10, Ky.
Volcano Burner Corp., 3612 E. Tremont Av., New York 61, N. Y.
Vol-U-Trol Co., Hwy. 61 & Kohlman Av., St. Paul 9, Minn.
Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., 88 Holten St., Danvers, Mass.
Vulcan Radiator Co., 26 Francis Ave., Hartford 6, Conn.
Vyke Brake Co., 1116 S. 27th St., Omaha, Nebr.

W

W. C. Products, Inc., 1748 Berkeley St., Santa Monica, Calif.
W. G. B. Oil Clarifier, Inc., 139 Cornell, Kingston, N. Y.
Wabash Mfg. Co., 2318 S. Western Ave, Chicago 8, Ill.
Wade Mfg. Co., Div Woodruff & Edwards, Inc., Elgin, Ill.
Wagner Awning & Mfg. Co., 2658 Scranton Rd., Cleveland 1, Ohio.
Wagner Electric Corp., 6400 Plymouth Av., St. Louis 14, Mo.
Wales-Strippit Corp., 345 Payne Ave., North Tonawanda, N. Y.
Walker Mfg. & Sales Corp., 1711-1717 Penn St., St. Joseph 1, Mo.
Wallace Co., William, Metalbestos Div., Belmont, Calif.
Wall Colmonoy Corp., 19345 John R St., Detroit 3, Mich.
Walsh Refractories Corp., 101 Ferry St., St. Louis 7, Mo.
Waltham Oil Burner Co., 1214 Bennington St., E. Boston, Mass.
Walton Laboratories, Inc., 1186 Grove St., Irvington, N. J.
Ward Industries, Inc., Edgar T., 820 S. Pulaski Rd., Chicago 24, Ill.
Ward Heater Co., 1800 W. Washington Blvd., Los Angeles 7, Calif.
Ward Leonard Electric Co., 115 MacQuesten Parkway, S., Mt. Vernon, N. Y.
Ward Machinery Co., 564 W. Washington Blvd., Chicago 6, Ill.
Warner Ventilator Co., LeGrange, Ind.
Wasco Flashing Co., 87 Fawcett St., Cambridge, Mass.
Washington Steel Corp., Washington, Pa.
Washington Stove Works, 3402 Smith St., Everett, Wash.
Water Cooling Corp., 71 Nassau St., New York 38, N. Y.
Water Cooling Equipment Corp., 8601 New Hampshire Ave., St. Louis 23, Mo.
Water Cooling Tower Co., 5501 Cornell Ave., Chicago, Ill.
Waterman-Waterbury Co., 1122 Jackson St., N. E., Minneapolis 13, Minn.
Waverly Heating Supply Co., 31 Union St., Boston 8, Mass.
Wayne Home Equipment Co., Inc., 801 Glasgow Av., Fort Wayne 4, Ind.
Wayne Mfg. Co., 1201 E. Lexington St., Pomona, Calif.
Weatherall Engineers, Inc., 387 Charles St., Providence 4, R. I.
Weatherhead Co., 300 E. 131st St., Cleveland 8, Ohio.
Webb Co., Jervis B., 8951 Alpine Ave., Detroit 4, Mich.
Webb Machine and Tool Co., Imperial, Pa.
Webber Co., Inc., A. R., 424 Howard Ave., New Haven 11, Conn.
Webster Electric Co., DeKoven & Clark Sts., Racine, Wis.
Webster Engineering Co., 419 W. 2nd St., Tulsa, Okla.
Weiger Weed & Co., Div. Fansteel Metallurgical Corp., 11644 Cloverdale Ave., Detroit 4, Mich.
Weirton Steel Co., P. O. Box 431, Weirton, W. Va.
Weiss & Co., H., 113-115 Mercer St., New York, N. Y.
Weksler Thermometer Corp., Martinique Bldg., 49 W. 32nd St., New York 1, N. Y.
Weldex, Inc., 2200 W. Fort St., Detroit 16, Mich.
Welding Machines Mfg. Co., 17325 Lamont Av., Detroit 12, Mich.
Welding Sales & Engineering Co., 8750 Grinnell Av., Detroit 13, Mich.
Weldit, Inc., 990 Oakman Blvd., Detroit 6, Mich.
Wells Mfg. Corp., 1818 Wilson Av., Three Rivers, Mich.
Werner Co., Inc., R. D., 295 Fifth Av., New York 16, N. Y.
West Pacific Sales Co., 1825 S. W. 6th Ave., Portland 1, Ore.
Western Blower Co., 1800 Airport Way, Seattle 4, Wash.
Western Brass Mills, Metals Div. of Olin Industries, Inc., East Alton, Ill.
Western Engineering & Mfg. Co., 4114 Ocean Park Ave., Venice, Calif.
Western Felt Works, 4029 Ogden Av., Chicago 23, Ill.
Western Mineral Products Co., 1720 Madison St., N. E., Minneapolis 13, Minn.
Western Precipitation Corp., 1016 W. 9th St., Los Angeles 15, Calif.
Western Reserve Laboratories, 1438 St. Clair Av., Cleveland 14, Ohio.
Western Rock Wool Corp., P. O. Box 545, Huntington, Ind.
Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa.
Westinghouse Electric Corp., Electric Appliance Div., East Springfield, Mass.
Westinghouse Electric Corp., Lamp Div., Bloomfield, N. J.
Westinghouse Electric Corp., Sturtevant Div., 105 Readville St., Hyde Park, Boston 36, Mass.
Weston Electrical Instrument Corp., 614 Frelinghuysen Av., Newark 5, N. J.

Westwick & Son, Inc., John, Claude & Meeker Sts., Galena, Ill.
West Wind Corp., 1800 Airport Way, Seattle 4, Wash.
Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.
Wheeler Mfg. Co., C. H., 1739 Sedgley Ave., Philadelphia 32, Pa.
Wheeling Corrugating Co., Wheeling Steel Bldg., Wheeling W. Va.
Wheeling Steel Corp., Wheeling Steel Bldg., Wheeling, W. Va.
Wheelock Co., Geo. F., The, 3017 S. Second Av., Birmingham 5, Ala.
Whipple Sheet Metal Works, M. S. & L. H., 913 E. Shiwassee, Lansing 12, Mich.
Whirlaway Motors, Tippecanoe City, Ohio.
White & Sons, Inc., Wilfrid O., 178 Atlantic Av., Boston 10, Mass.
White Mfg. Co., 2362 University Av., St. Paul, Minn.
White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.
Whiteley Bearing Corp., 1238 S. Ashland Ave., Chicago 8, Ill.
Whiting Corp., 157th St. & Lathrop Av., Harvey, Ill.
Whiting Fire Power Products Corp., 1507 N. 1st St., Superior, Wis.
Whitlock Mfg. Co., 64 South St., Hartford 10, Conn.
Whitney Mfg. Co., W. A., 636 Race St., Rockford, Ill.
Whitney Metal Tool Co., 91 Forbes St., Rockford, Ill.
Whitty Co., Inc., 86 Western Av., Boston 34, Mass.
Wickwire Spencer Steel Div. Colorado Fuel & Iron Corp., 500 Fifth Ave., New York 18, N. Y.
Wiedemann Machine Co., 4272 Wissahickon Ave., Philadelphia 32, Pa.
Wilbur & Williams Co., 130 Lincoln St., Brighton 35, Mass.
Wilde Register & Grille Co., 424 Bellevue, Detroit, Mich.
Wilder Mfg. Co., Inc., Box 880, Carmel, Calif.
Wilder Mfg. Co., 2300 S. Main St., Niles, Ohio.
Wilder Products Co., 2422 Columbus Av., Springfield, Ohio.
Will-Burt Co., Orrville, Ohio.
Williams Oil-O-Matic Div., Eureka-Williams Corp., 1201 E. Bell, Bloomington, Ill.
Williams Radiator Co., 1821 Flower St., Glendale 1, Calif.
Williamson Heater Co., 3500 Madison Rd., Cincinnati 9, Ohio.
Willis Steel Corp., 156 N. Academy St., Galesburg, Ill.
Willson Products, Inc., 248 Thorn St., Reading, Pa.
Will-Weld Mfg. Co., Inc., 1523 Marcy St., Omaha 2, Nebr.
Wilson & Co., Inc., 4100 S. Ashland Av., Chicago 9, Ill.
Wilson, Inc., Grant, 141 W. Jackson Blvd., Chicago 4, Ill.
Wilson, K. R., 215 Main St., Buffalo 3, N. Y.
Wilster, Inc., 5700 Detroit Av., Cleveland 2, Ohio.
Windmaster Corp., 897 Ingleside, Columbus, Ohio
Wind-Way Fan & Ventilator Co., 527 St. Joseph St., New Orleans 12, La.
Wing Mfg. Co., L. J., 306 Vreeland Mills Rd., Linden, N. J.
Winkler & Sons, Inc., A. E., 2337 N. 31st St., Milwaukee 10, Wis.
Wiremold Co., Hartford 10, Conn.
Wisconsin Oil Burner Co., 1134 Regent St., Madison 5, Wis.
Wise Furnace Co., South 21st St., Newark, Ohio
Wiss & Sons Co., J., 11-45 Littleton Ave., Newark 7, N. J.
Wittenmeier Machinery Co., 850-860 N. Spaulding Ave., Chicago 51, Ill.
Wodack Electric Tool Corp., 4627 W. Huron St., Chicago 44, Ill.
Wolfe-Kote Co., 1225 N. 8th St., Sheboygan, Wis.
Wolff and Co., Benjamin, 5800 S. Seeley Ave., Chicago 36, Ill.
Wolverine Tube Div., Calumet & Hecla, Inc., 1850 Guardian Bldg., Detroit 26, Mich.
Wood Conversion Co., First National Bank Bldg., St. Paul 1, Minn.
Wood Steel Co., Alan, P. O. Box 112, Conshohocken, Pa.
Wood Co., John, Heater & Tank Div., Conshohocken, Pa.
Wood's Sons Co., T. B., 1275 Fifth Av., Chambersburg, Pa.
Woolley Engineering Co., 19956 James Couzens Hwy., Detroit 35, Mich.
Worcester Brush & Scraper Co., Div. Mason Worcester Co., 38 Austin St., Worcester 2, Mass.
Worcester Pressed Steel Co., 99 Barber Av., Worcester 6, Mass.
Worsham Co., Inc., 319 Ocean Center Bldg., Long Beach 2, Calif.
Worthington Corp., Harrison, N. J.
Wright Hoist Div., American Chain & Cable Co., Inc., York, Pa.
Wysong & Miles Co., 625 Fulton St., Greensboro, N. C.
Wyzenbeek & Staff, Inc., 223-235 N. California Av., Chicago, Ill.

X

XL Refrigerating Co., 1834 W. 59th St., Chicago 36, Ill.
X-Pando Corp., 43-15 36th St., Long Island City 1, N. Y.
XXth Century Heating & Ventilating Co., 96 Ira Av., Akron 1, Ohio.

Y

Yale & Towne Mfg. Co., The, Philadelphia 15, Pa.
Yardley Plastics Co., 138 Parsons Ave., Columbus 15, Ohio
Yarnall-Waring Company, Chestnut Hill, Philadelphia 18, Pa.
Yates-American Machine Co., Beloit, Wis.
Yeomans Bros. Co., 1999 N. Ruby St., Melrose Park, Ill.
Yoder Co., 5500 Walworth Av., Cleveland 2, Ohio.
York Corrugating Co., Adams St. & W M RR., York, Pa.
York Corp., Roosevelt Av., York, Pa.
York Electric and Machine Co., 30-34 N. Penn St., York, Pa.
York-Shipley, Inc., Jessop Place and P. R. R., York, Pa.
Young & Bertke Co., 1004-14 Hulbert Ave., Cincinnati 14, Ohio.
Young Radiator Co., 709 S. Marquette St., Racine, Wis.
Young Regulator Co., 5209 Euclid Av., Cleveland 3, Ohio.
Youngstown Furnace Co., 627 Marshall St., Youngstown, Ohio.
Youngstown Sheet & Tube Co., Stambaugh Bldg., Youngstown 1, Ohio.

Z

Zeh Co., Inc., 364 Highland Av., Passaic, N. J.
Zeh & Hahnemann Co., 182-200 Vanderpool St., Newark 5, N. J.
Zeigler-Harris Co., 2900 N. San Fernando Rd., Burbank, Calif.
Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.
Zick Sheet Metal Works, 25150 W. Warren Ave., Dearborn, Mich.
Zink Co., John, 4401 S. Peoria St., Tulsa 1, Okla.
Zonolite Co., 135 S. LaSalle St., Chicago 3, Ill.

Section of

American Artisan

1953 DIRECTORY OF WARM AIR HEATING, RESIDENTIAL AIR CONDITIONING AND SHEET METAL PRODUCTS

[SECTION 4—INDEX TO ADVERTISERS AND PRODUCTS ADVERTISED IN THIS ISSUE]

A & A REGISTER CO. 218
Air conditioning register; gravity and baseboard registers; laundry chute doors.

ACCURATE SHEET METAL & MFG. WORKS 313
Chimney top ventilators.

ADAMS CO., THE 311
Chimney clean-out door.

ADAMS MFG. CO. 61
Gas conversion burners.

ADELTA MFG. CO., INC. 250
Ducts; pipes; duct fittings.

AEROFIN CORP. 299
Heat-transfer units.

AIR CONTROL PRODUCTS, INC. ..... Inside Front Cover
Sidewall, floor, perimeter and baseboard registers; diffusers; grilles.

AIR CONTROLS, INC. DIV., THE CLEVELAND HEATER CO. 269
Circulating, ventilating, window, attic, roof and furnace fans.

AIRTEMP DIV., CHRYSLER CORP. 191
Gas and oil fired standard and utility room furnaces; conversion burners; year 'round air conditioners.

AJAX FURNACE FITTING CO. 300
Pipe and fittings.

A-J MFG. CO. 209
Heating and air conditioning wall, floor and door grilles and registers.

ALLEN CO., INC., L. B. 229
Metal brushes; sal ammoniac; acid swabs; soldering liquid, paste, oil, salts and acid; stainless steel and silver flux; aluminum and silver solder.

ALLEN VENTILATOR DIV., PRODUCTION PLANNING CO. 299
Roof ventilators.

ALTON MFG. CO. 275
Air washers; evaporative coolers.

AMERICAN BRASS CO., THE 190
Prefabricated through-wall flashings; copings; expansion joints.

AMERICAN FURNACE CO. 206
Gas, oil and coal fired counterflow, standard and utility room furnaces; oil, gas and coal conversion units.

AMERICAN PNEUMATIC TOOL CO. 232
Pneumatic hammer for sheet metal erection.

AMERICAN RADIATOR & STANDARD SANITARY CORP. 166, 167
Gas fired winter air conditioners.

ANEMOSTAT CORP. OF AMERICA 24
Air diffusers.

A-P CONTROLS CORP. 272, 273
Oil, gas and refrigeration controls; accessory kits; space heater controls.

ARMSTRONG FURNACE CO. 233
Gas, oil and coal fired standard, utility room, counterflow, suspended and gravity furnaces; conversion burners.

ATLAS MFG. CO. 18
Cabinets; casings.

AUER REGISTER CO., THE 251
Sidewall, floor, perimeter and baseboard registers and grilles.

AUTO-FLO CORP. 259
Furnace humidifiers; humidifier plates.

AUTOMATIC HUMIDIFIER CO. 132
Counterflow furnace humidifier; drip and vaporizing humidifiers.

BACHARACH INDUSTRIAL INSTRUMENT CO. 300
Air velocity meters.

BARBER GAS BURNER CO. ..... Facing 244
Gas burners.

BARBER-COLMAN CO. 12
Volume control grilles.

BARD MFG. CO. 188
Conversion burners; oil and gas fired winter air conditioners; water heaters.

BARTLETT MFG. CO. 314
Lever snips; bench shears.

BERGER BROS. CO. 308
Snow guards; strap hangers.

BESCO MFG. CO. 313
Bench shears.

BESSER METAL PRODUCTS CORP. 295
Horizontal furnaces.

BETHLEHEM STEEL CO. 235
Galvanized steel sheets.

BETT-MARR MFG. CO. 185
Metal cutting band saws.

BEVERLY SHEAR MFG. CO., THE 290
Shears; cable cutters; slotters.

BIRKS MFG. CO. 314
Pittsburgh lock seam opener.

BISHOP & BABCOCK MFG. CO., THE 300
Air conditioning and furnace blowers.

BLACK & DECKER MFG. CO. 284
Shears; screw drivers; hammers; bench grinders; drills.

BOSTON MACHINE WORKS CO. 302
Baffles; combustion chambers; nozzle extractors; oil tank gages; oil burner nozzles; draft controls; nozzle kits.

BRANDES CO. 236
Baseboard diffusers.

BRAUER SUPPLY CO., A. G. 237
Furnace repair parts and accessories; insulation.

BRUNDAGE CO. 238
Blower assemblies; blower-filter package units; direct drive blowers.

CAREY MFG. CO., PHILIP 227
Asbestos air duct.

CENTRAL-WEST MACHINERY CO. 313
Sheet metal machinery and tools.

CENTURY ELECTRIC CO. 186
Fractional hp and heavy duty motors.

CENTURY ENGINEERING CORP. 3
Gas and oil counterflow, standard and utility room furnaces; gas and oil conversion burners; industrial units.

CERTIFIED FURNACE CO., DIV. STAINLESS & STEEL PRODUCTS CO. ..... Inside back cover
Oil, gas and coal fired conventional and utility room furnaces.

CHAMPION BRONZE POWDER & PAINT CO. 294
Paint spray; aluminum paints; lacquers; powders; paste; bronze powders.

CHAMPION FURNACE PIPE CO. 5
Pipe and duct fittings.

CHAMPION TOOL CO. 313
Draw action pipe crimper.

CHAR-GALE MFG. CO. 16, 17
small pipe package systems.
Sidewall and baseboard registers; floor and ceiling diffusers;

CHASE BRASS & COPPER CO. 169
Base flashing; base flashing expansion joints; thru-wall flashing; cap flashing receivers.

CINCINNATI ELBOW CO., THE 272
Pipe and duct elbows.

CINCINNATI SHAPER CO., THE 217
Shapers; shears; brakes.

CIRCULATAIRE DIV., CORLETT-TURNER CO. 305
Furnace bonnet fans.

CLARAGE FAN CO. 210, 211
Centrifugal blowers and fans; packaged blower units.

CLEVELAND HUMIDIFIER CO., THE 274
Humidifiers.

CLIMATEMAKER HEAT LOSS CALCULATOR CO. 287
Slide rule heat loss calculators.

COLEMAN CO., INC., THE 241
Oil, gas, LP-gas furnaces; small pipe package systems.

CONCO ENGINEERING WORKS, HEATING DIV. 216
Complete line of warm air furnaces; year 'round air conditioners.

CONDENSATION ENGINEERING CORP. 10
Prefabricated chimneys.

CONTINENTAL STEEL CORP. 228
Dull-coat, galvannealed, copper-nickel-chromium and copper-steel sheets.

CONNOR ENGINEERING CORP. 263
Residential ceiling diffuser.

COOK CO., LOREN 301
Roof, duct, attic, wall and portable fans.

CRESCENT TOOL CO. 180
Wrenches; screw drivers; hacksaws; snips; pliers.

CRISE CONTROLS DIV., ACRO MFG. CO. 25
Limit, fan, two speed, combination, hot water and zone controls.

DAFFIN MFG. CO. 301
Plenum humidifier.

DAHLSTROM MACHINE WORKS, INC. 287
De-coiling equipment; coil reels.

DELCO APPLIANCE DIV., GENERAL MOTORS CORP. 71
Oil and gas fired conversion burners; forced warm air furnaces; water heaters.

DELCO PRODUCTS DIV., GENERAL MOTORS CORP. 183
Fractional hp and large electric motors.

DELTA HEATING CORP. 286
Oil fired conventional, utility room, counterflow, suspended, floor, wall and gravity furnaces; gas and oil conversion burners.

DETROIT CONTROLS CORP. 267
Thermostats; gas valves; refrigeration, air conditioning and domestic heating controls.

DETROIT REGULATOR CO. 279
Gas pressure regulators.

DIAMOND MFG. CO. 301
Perforated metals; architectural grilles.

DIECKMANN CO., FERDINAND 303
Conductor elbows and shoes.

DOLE VALVE CO., THE 221
Automatic registers.

DOWAGIAC STEEL FURNACE CO. 56
Furnaces and winter air conditioners for all fuels; gas and electric water heaters.

DOYLE VACUUM CLEANER CO. 303
Furnace vacuum cleaners.

DREIS & KRUMP MFG. CO. 189
Press brakes; standard hand brakes; portable hand brakes; box and pan brakes.

DURO-DYNE CORP. 303
Damper hardware.

ELGO SHUTTER & MFG. CO. 279
Automatic, motorized, stationary and manual shutters; ceiling dampers.

EMERSON ELECTRIC MFG. CO. 197
Fractional hp and large electric motors.

EUREKA WILLIAMS CORP. 184
Gas and oil-fired utility room, standard and gravity furnaces; conversion burners; summer air conditioning units.

EXCELSIOR STEEL FURNACE CO., THE 240
Forced air ducts and fittings; stainless steel chimney liners; gas diverters; sheet metal specialties.

FALLSINGTON MFG. CO. 282
Notching, punching and rolling machines; beaders and crimpers; pipe lock machines; hand tools; clip punches; drive cleat notchers and shears.

FAMOUS FURNACE CO., THE 262
Furnaces; cooling equipment; roofing sheets; accessories; machinery; tools.

FIELD CONTROL DIV., H. D. CONKEY & CO. 281
Barometric dampers.

FIREWEL CO., INC., THE 299
Oil and gas furnaces.

FOLLANSBEE STEEL CORP. 63, 64
Terne roofing rolls.

FRIGIDAIRE DIV., GENERAL MOTORS CORP. 171
Year 'round and window type air conditioners; compressors; cooling coils.

GALVAN MFG. CO. 298
Funnels; conductor elbows; gutter cut-offs.

GENERAL CONTROLS CO. 58, 59
Standard and timer thermostats; gas valves; pilot generators.

GENERAL FILTERS, INC. 264
Fuel oil filters; soot remover.

GENERAL PRODUCTS CO. ..... Facing 245
Packaged chimneys.

GERETT CORP., M. A. 302
Damper regulators.

GLASBY MFG. CO., INC., J. P. 283
Up-side-down and conventional furnaces; gas conversion burners.

GLASS FIBERS, INC. 243
Duct and blanket insulation.

GLASFLOSS 170
Disposable air filters; bulk rolls of glass fibers mats.

GLYCOLATOR 309
Air sterilizers.

GRAY METAL PRODUCTS, INC. 244
Duct and duct fittings.

HALL-NEAL FURNACE CO. 34, 35
Gas and oil fired standard and counterflow furnaces; oil fired suspended units; coal fired forced air and gravity furnaces; blowers; conversion burners; accessories.

HALLMARK PRODUCTS CO. 226
Conventional, counterflow and horizontal oil and gas fired furnaces.

HALLMOR, INC. 303
Bending brakes.

HAMMEL RADIATOR ENGINEERING CO. 48
Wall heaters.

HARRIS, A. R. 313
Portable hand brakes; benches; ladder brackets; clamps; hand tools.

HART & COOLEY MFG. CO. 14, 15
Air conditioning registers and grilles; floor, sidewall and baseboard registers; ceiling diffusers; return air intakes; furnace and damper regulator sets; damper and casing clips; pulleys; chain.

HEIL CO. 172, 173
Gas and oil fired conventional and utility room furnaces; gas and oil conversion burners.

HENRY FURNACE CO., THE 22, 23
Gas, Oil, and Coal fired standard, utility room, counterflow suspended and gravity furnaces; conversion burners.

HOMEASE PRODUCTS CO. 294
Oil burners.

HUGERT MFG. CO. 302
Pipe; fittings.

HUSSEY & CO., C. G. 175
Through wall flashing; ridge roll; eave troughs; conductor pipe; copper tubing and nails; flashings and sheet copper.

INDEPENDENT REGISTER CO., THE 65
Wall, baseboard and floor registers and grilles.

INLAND STEEL PRODUCTS CO. 28
Rain-carrying and roofing products.

INTERNATIONAL HEATER CO. 78, 79
Gas and oil fired standard, utility room, counterflow and suspended furnaces; conversion burners.

INTERNATIONAL NICKEL CO., INC. 214
Roofing sheet.

JABSCO PUMP CO. 301
Evaporative cooler pumps.

JACKSON & CHURCH CO. 223
Warm air heating equipment; processing and molding machines.

JETTRONAIRE, INC. 219
Small pipe packaged heating systems, oil and gas models.

JOHNSON GAS APPLIANCE CO. 305
Bench furnaces.

JOHNSON LADDER SHOE CO. 314
Ladder shoes.

JUNIPER ELBOW CO., INC. 314
Adjustable elbows; registers; grilles.

KENT CO., INC. 305
Furnace vacuum cleaner.

KIRK & BLUM MFG. CO., THE 310
Elbows; hoods; ball joints; floor sweeps; blast gates; stamped and rolled angle rings.

KRAUS MFG. CO., CHARLES E. 312
Cutting, crimping and beading machines.

KRUEGER AIR CONDITIONING CO. 285
Ceiling diffuser; registers.

KRUEGER SENTRY GAUGE CO. 6
Tank gages.

LAHARCO INDUSTRIES 305
Gas conversion burners.

LAKE CHEMICAL CO. 304
Flux.

LAU BLOWER CO., THE 60
Blower and blower assemblies.

LIMA REGISTER CO. 192
Perimeter wall diffusers; floor and wall registers; wall stackheads.

LIVINGSTON, INC. 311
Furnace repair parts.

LEVOW, DAVID 309
Snow guards; skylight gearing; roof strainers; 3-way clamps; saw guns; ornamental straps; swing chimney jack frames.

LOCKFORMER CO., THE 7, 13
Pittsburgh lock formers; slitting shear.

MADE-RITE CO., INC. 248
Furnace and duct fittings.

MAID-O'-MIST, INC. 178
Humidifiers; water line controls; heating specialties.

MARSHALLTOWN MFG. CO. 307
Rotary throatless shears.

MAYFLOWER AIR-CONDITIONERS, INC. 20
Gas and oil fired furnaces.

MAYNE PRODUCTS CO. 181
Blower wheels.

McLARTY SYSTEMS 310
Cold air return booster fans.

MELAWAY CORP. 292
Splice gutters.

MERCOID CORP., THE 208
Combustion safety and oil burner controls.

METALBESTOS DIV., WILLIAM WALLACE CO. 174
Prefabricated chimneys; vent caps.

METROMATIC MFG. CO. 246, 247
Oil fired winter air conditioner with domestic hot water supply.

MEYER & BRO. CO., F. 207
Furnace pipe; fittings; duct work.

MEYER FURNACE CO., THE 203
Packaged small pipe systems; gas, oil and coal furnaces.

MIDCO REGISTER CORP. 257
Sidewall, baseboard, floor and perimeter registers.

MILLER CO., THE 311
Vaporizing oil burners.

MILLER & DOING 301
Ornaments; stampings and spinnings.

MILTON EQUIPMENT CO. 309
Sheet metal machinery and tools.

MINE SAFETY APPLIANCES CO. 295
Gas masks; respirators; protective clothing; first aid kits.

MINNEAPOLIS-HONEYWELL REGULATOR CO. 66, 67
Outside thermostats; clock thermostats; electronic controls.

MORRISON PRODUCTS, INC. 252
Furnace blower wheels.

MOR-SUN FURNACE DIV., MORRISON STEEL PRODUCTS, INC. 162, 163
Gas and oil fired conventional, utility room and counterflow furnaces.

MUELLER FURNACE CO., L. J. 41, 42, 43, 44, 45, 46
Gas, oil and coal fired standard, utility room, counterflow, suspended and gravity furnaces; gas and oil conversion burners; small pipe package systems; registers; grilles; furnace pipe and duct fittings; packaged summer cooling units; blower-filter units; incinerators; humidifiers; gas pressure regulators; boilers.

NATIONAL ENGINEERING & MFG. CO. 291
Evaporative coolers.

NATIONAL LOCK CO. 297
Cabinet hardware.

NATIONAL METAL FABRICATORS 304
Angle rings.

NATIONAL SUPER SERVICE CO., INC. 292
Furnace vacuum cleaners.

NIAGARA MACHINE & TOOL WORKS 21
Power and manually operated shears; folders; rotary machines; slip roll formers; hand tools.

NIAGARA FURNACE DIV., FOREST CITY FOUNDRIES CO. 179
Gas, oil and coal standard and counterflow furnaces; gravity furnaces.

NORGE HEAT DIV., BORG-WARNER CORP. 198, 199
Gas and oil fired forced air, gravity and horizontal furnaces; coal gravity furnaces; oil and gas boilers; oil and gas conversion burners; water heaters.

NU-WAY CORP., THE 11
Domestic and commercial oil burners.

OBDYKE, INC., BENJAMIN P. 304
Gutters.

OHIO VALLEY HARDWARE & ROOFING CO. 266
Furnace and duct fittings.

OLSEN MFG. CO., C. A. 30 31
Gas, oil and coal fired standard, utility room, counterflow suspended and gravity furnaces; conversion burners.

O'NEIL-IRWIN MFG. CO. 256
Power shears and benders; hand shears; rollers; benders; finger brakes; punch presses; notchers.

ORAN CO. 306
Oil and gas fired floor furnaces; oil and gas fired central heating systems.

OWENS-CORNING FIBERGLAS CORP. 204
Air filters.

PALMER MFG. CORP. 164, 165
Evaporative coolers.

PARKER-KALON CORP. 182, 276, 277
Damper controls; damper regulators; screwnails; sheet metal screws; masonry nails.

PATTEN CO., J. V. 215
Oil and gas furnaces; summer air conditioning units.

PAYNE FURNACE DIV., AFFILIATED GAS EQUIPMENT, INC. 268
Utility room, floor, wall and attic furnaces.

PECK, STOW & WILCOX CO., THE 222
Slitting and squaring shears; combination rotary machines; edging machines; crimpers and beaders; bar folders; forming machines; hand shears; seamers; snips.

PEERLESS ELECTRIC CO., THE 76, 77
Furnace blowers; exhaust fans; blower-filter packages; large direct drive and belt driven blowers.

PEERLESS FURNACE AND FOUNDRY, INC. 275
Oil and gas fired conventional, utility room and counterflow furnaces.

PENN CONTROLS, INC. 161
Thermostats; hot water controls; fan and limit controls; limit or operating controls; gas valves; night thermostats; stack switches.

PENN VENTILATOR CO. 280
Rotary and ridge roof ventilators.

PETERSEN MFG. CO., INC. 306
Wrenches and clamps.

POLIS MFG. CO., J. D. 299
Expansion shells and anchors.

POTTS-FARRINGTON CO. 312
Aluminum sheets and roofing; copper; zinc; stainless steel; tin and terne plate; hot galvanized angles; bands; flats; rounds; bar size structurals; expanded metal; nails.

PREMIER FURNACE CO. 19
Oil fired counterflow furnaces.

QUICKDRAFT CO., DIV. HALL'S SAFE CO., INC. 278
Barometric dampers.

QUIET AUTOMATIC BURNER CORP. 307
Suspended furnaces.

QUINCY STOVE MFG. CO., THE 258
Oil fired wall furnaces.

RADIANT UTILITIES CORP. 297
Oil fired conventional, suspended and counterflow furnaces; conversion burners.

R. C. S. TOOL SALES CORP. 70
Electric saws; saw blades and lubricant.

REINER & CAMPBELL CO., INC. 314
Soldering outfits; clip punches; shears; drive cleat notchers; dividers; acetylene soldering irons.

REVERE COPPER & BRASS, INC. 127
Copper facias; roof flashing; sheet, strip or roll copper.

RHEEM MFG. CO., INC. 193, 194, 195, 196
Gas and oil fired conventional, counterflow, utility room, suspended and gravity furnaces; floor, wall and console heaters.

RICHMOND RADIATOR CO. 33
Gas fired winter air conditioners.

ROCK ISLAND REGISTER CO. 289
Perimeter wall and floor diffusers; complete line of gravity and air conditioning registers.

ROUND OAK CO., INC. 293
Oil and gas fired conventional, utility room and counterflow furnaces.

ROYAL HEATERS, INC. 26, 27
Gas fired wall and utility furnaces.

RUBY CHEMICAL CO. 310
Soldering flux.

RYERSON & SON, INC., JOSEPH T. 80
Hot and cold rolled sheet metal; bars; channels; angles; beams; plates; tubing; stainless and other alloy sheets; machinery and tools.

SAN ANGELO FOUNDRY & MACHINE CO. 306
Slip roll formers.

SCHAEFER BRUSH MFG. CO. 220
Cleaning, acid, flue and wire brushes.

SCHNACKE, INC. 234
Packaged residential cooling systems.

SCHWAB FURNACE CO. 310
Incinerators.

SCULLY SIGNAL CO. 298
Tank gauges; fuel indicators.

SEQUOIA MFG. CO. 255
Gas fired utility room and suspended furnaces.

SERVEL, INC. 202
Year 'round packaged air conditioners.

SKIL CORP. 200
Disc sanders; electric drills.

SKUTTLE MFG. CO. 51
Humidifiers.

SMITH CORP., A. O. 75
Gas fired winter air conditioners; gas conversion burners; water heaters.

SMITH, R. E. 283
Cleat benders.

SONOCO PRODUCTS CO. 213
Fibre duct.

SOUTHWEST MFG. CO. 242
Gas fired forced air furnaces; floor furnaces; wall heaters.

STALB, JOSEPH G. 313
Estimating sheet for duct sizing, air requirements, and equipment capacities for forced warm air winter air conditioning systems.

STANDARD HEATING EQUIPMENT CO. 287
Oil fired furnaces.

STANDARD STAMPING AND PERFORATING CO. 201
Perimeter floor register with control; multiple valve register.

STANLEY ELECTRIC TOOLS 296
Power shears; tools; steel strappings.

STEEL CITY FURNACE CORP. 285
Gas and oil fired conventional and utility room furnaces.

STEFCO STEEL CO. 49
Prefabricated combustion chambers.

SUNDSTRAND ENGINEERING CO. 8
Oil burners.

SUNDSTRAND MACHINE TOOL CO. 38
Fuel pumps.

SUN-RAY BURNER MFG. CORP. 260
Horizontal and vertical flame oil burners.

SUPERIOR FURNACE & MFG. CO. 291
Gas and oil fired conventional, counterflow, suspended and gravity furnaces.

SURFACE COMBUSTION CORP. 72, 73
Heat exchangers; furnaces.

SUTTON CORP., O. A. 249
Window air conditioners.

SWARTWOUT CO., THE 296
Roof ventilators; gravity ventilators; powered ventilators; louvers.

SYNCROMATIC CORP. 36, 37
Gas, oil and coal fired forced and gravity furnaces; large commercial warm air furnaces.

TECUMSEH PRODUCTS CO. 254
Hermetically sealed compressors.

THATCHER FURNACE CO. 177
Complete warm air heating line; suspended gas-fired furnaces.

THERMAC CO. 270
Gas pressure regulating valves.

THOR METAL PRODUCTS CO., INC. 310
Furnace pipe and fittings; ducts; eaves troughs; drip edge; rake strip.

THOR TOOL AND DIE CO. 309
Lock dies; clip punches.

TIMKEN SILENT AUTOMATIC DIV., TIMKEN-DETROIT AXLE CO. 68, 69, 307
Oil and gas fired conventional, utility room, counterflow and gravity furnaces; gas and oil conversion burners.

TINIT MFG. CO., INC. 308
Soldering fluxes; hand cleaners.

TITUS INCORPORATED 129, 130, 131
Baseboard perimeter diffusers; grilles.

TORIDHEET DIV., CLEVELAND STEEL PRODUCTS CORP. 62
Rotary wall burners; winter air conditioners; gun burners; gun fired furnaces; gas conversion burners; gas fired furnaces.

TRADE-WIND MOTORFANS, INC. 308
Kitchen exhaust fans; room ventilators.

TRIANGLE MFG. CO. 307
Pillow blocks; bearings.

TURNER BRASS WORKS, THE 288
Soldering furnaces; blow torches.

TYPHOON AIR CONDITIONING CO., INC. 245
Combination cooling systems and gas fired heating units.

UNION ASBESTOS & RUBBER CO. ..... Outside back cover
Building and duct insulation.

UNION MFG. CO., INC. 311
Coal fired conventional and gravity furnaces.

U. S. MACHINE CORP. 253
Gas and oil fired conventional, utility room and wall furnaces; gas and oil conversion burners; low pressure oil burners.

U. S. STEEL SUPPLY CO. 176
Steel and steel products.

UNITED STATES REGISTER CO. 52, 53
Sidewall, floor, perimeter and baseboard registers; diffusers; grilles.

UTILITY APPLIANCE CORP. 205
Gas fired utility room furnaces; wall heaters; evaporative coolers; centrifugal blowers.

VAN-PACKER CORP. 50
Prefabricated chimneys.

VECTAIRE MFG. CO. 311
Baseboard diffusers.

VIKING AIR CONDITIONING CORP. 128
Attic and window fans; blower wheels; blower assemblies; humidifiers; package blowers.

VIKING SHEAR CO. 308
Compound shears.

VYKE BRAKE CO. 313
Folding brakes.

WALKER MFG. & SALES CORP. 168
Barometric draft regulators; chimney caps.

WARD MACHINERY CO. 309
Slitter shears.

WASHINGTON STEEL CORP. 239
Stainless steel sheets.

WATERMAN-WATERBURY CO., THE 157, 158, 159, 160
Oil, gas and coal fired conventional, counterflow, utility room, suspended and gravity furnaces; gas and oil conversion burners; year 'round air conditioners.

WAYNE HOME EQUIPMENT CO., INC. 187
Conversion oil burners.

WEBSTER ELECTRIC CO. 265
Fuel units and ignition transformers.

WHEELING CORRUGATING CO. 212
Galvanized sheets.

WHITNEY MFG. CO., W. A. 74
Slitting shears; hammers; bench, bearing, hand and lever punches; dies.

WHITNEY METAL TOOL CO. 316
Hand, bench, bearing, foot, lever and power punches; power and bench shears; brakes; angle iron combination; punch presses; rivet squeezers; hand tools; dies.

WILDER MFG. CO., INC. 224
Portable slitting shears.

WILLIAMSON HEATER CO., THE 54, 55
Gas, oil, coal and LP gas furnaces; pipe; packaged fittings.

WILLIS STEEL CORP. 313
Skylights.

WILSON & CO., INC. 293
Throwaway filters.

WILSON, INC., GRANT 57
Duct insulation.

WODACK ELECTRIC TOOL CORP. 313
Electric hammers.

WOLFF & CO., BENJAMIN 9
Carbon and stainless steel; aluminum; copper expanded metal; tin mill products; decorating metals.

WYSONG & MILES CO. 47
Power and foot squaring shears; presses; slip roll forming machines; rotary combination machines.

YOUNGSTOWN FURNACE CO. 289
Duct and duct fittings; furnace pipe and fittings.

ZEH CO., INC. 311
Combustion chamber baffle plates.

ZINK CO., JOHN 271
Wall heaters; gas fired floor and utility room furnaces; gas conversion burners.

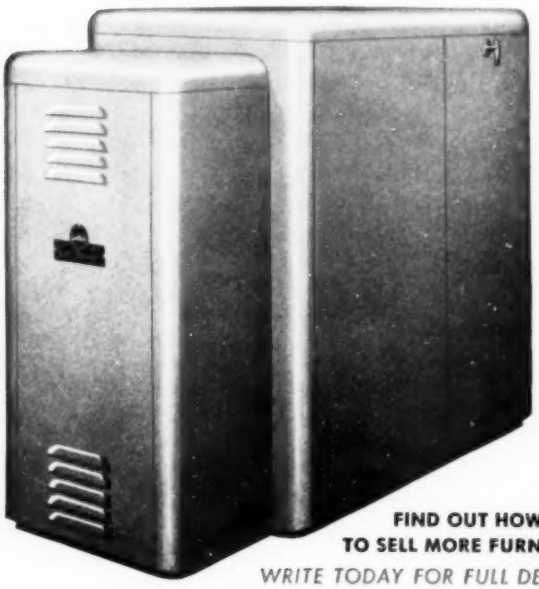
"Bonus Built"

EASIER TO SELL!



- **LOW COST** — Compete with any dealer in town for the big profits in low-cost units. And the CERTIFIED name means reliable quality — makes sales easier.
- **LOW FUEL BILLS** — Overall efficiency of "Bonus Built" oil furnaces ranges from 77% to 83% — exceptionally high, even compared with premium-priced competitive models. This is a particularly strong selling point in lower income brackets.
- **EXPANDABLE** — When the home is enlarged, blowers and and motors on Lo-Boy units can be increased one size in capacity. This makes them ideal for young homeowners who hope to add more space without replacing the furnace — and increases your sales.
- **LUXURY FEATURES** — Here are the features people look for — compare them with competitively-priced oil furnaces: • Minneapolis Honeywell Time Modulated Thermostats supplied with all burners. • Fully insulated with aluminum foil and glass wool. • Large, efficient wrap-around radiator. • Efficient gun-type Certified burner. • Air filters easy to clean and replace. • Stainless steel combustion chamber for reliability, low fuel consumption. • Clean-outs on all radiators. • Concave heads avoid "pings" due to expansion and contraction.

All models shipped fully assembled, ready to install.



VISIT OUR BOOTH
NO. 2-105
AT THE A. S. H. & V. E.
EXPOSITION
JANUARY 26-30
International Amphitheatre
CHICAGO, ILLINOIS

A MODEL FOR EVERY MARKET

● Certified "Bonus Built" oil fired furnaces are made in 3 major styles, the HI-BOY, the LO-BOY, and the COUNTERFLOW. These are made in multiple sizes with capacities from 75,000 to 125,000 Btu's. They will efficiently heat the average size home. Adaptable to all types of warm air heating, including perimeter heating. All models are suitable for quick, easy conversion to gas.

These low-cost units are backed up by a full line of famous Certified furnaces ranging from 90,000 to 1,750,000 Btu's — oil, gas or coal fired. The full line gives you an edge on competition in every bracket.

FIND OUT HOW
TO SELL MORE FURNACES
WRITE TODAY FOR FULL DETAILS

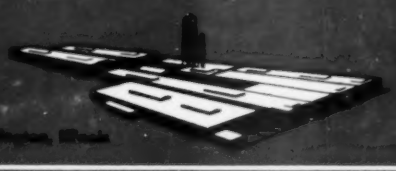
Certified

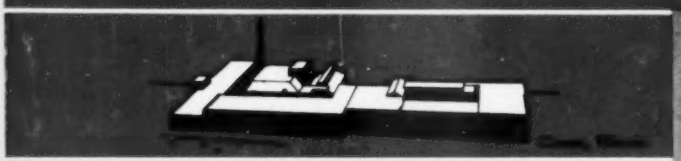


A COMPLETE LINE OF WARM AIR HEATING EQUIPMENT
OIL FIRING GAS FIRING COAL FIRING

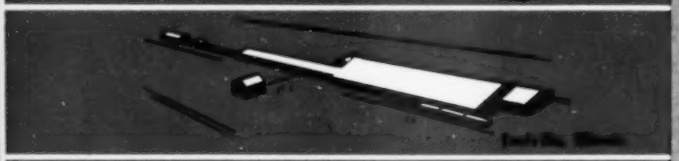
CERTIFIED FURNACE CO.

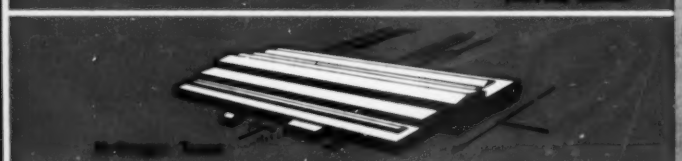
DIVISION OF STAINLESS & STEEL PRODUCTS CO.
1000 Berry Avenue St. Paul 4, Minnesota

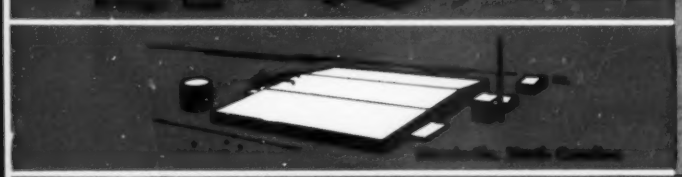






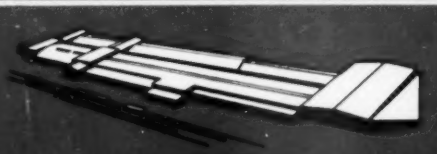






7

seven plants serve many industries' needs for...



Blue Island, Illinois

INSULATIONS for industrial, commercial, and railroad uses

ASBESTOS PACKINGS and GASKETS

ASBESTOS TEXTILES

SOUND-ABSORBING BLANKETS

35 YEARS of service to industry provide the experience to aid you in successfully solving every insulating problem...including *low*-pressure applications for local heating plants, ducts, cold water lines, etc. Unarco now brings you a complete line of insulations, all of finest quality and mass-produced by most modern methods for greatest user-economy. Today, more than ever, you can look to Unarco for progress, products, and profits.

UNARCO

UNION ASBESTOS & RUBBER COMPANY

332 South Michigan Avenue - Chicago 4, Illinois